

Major Weapons Systems

HIGHLIGHTS

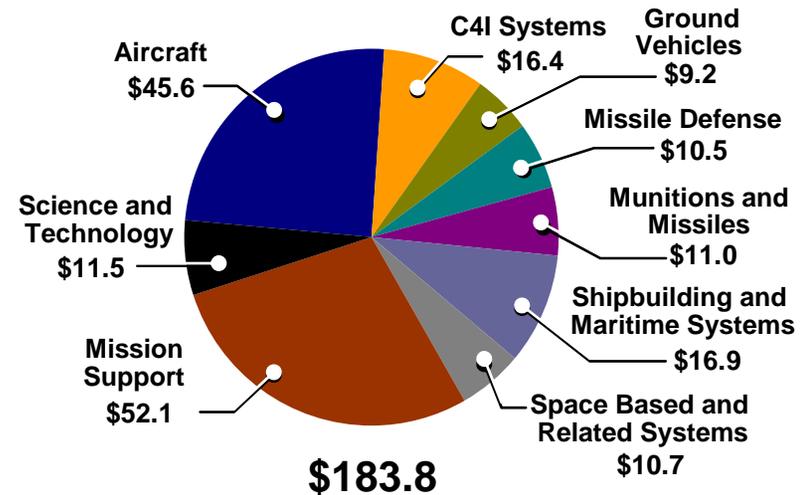
OVERVIEW

The combined capabilities and performance of U.S. weapons systems are unmatched throughout the world, ensuring that our military forces have the tactical edge over any adversary.

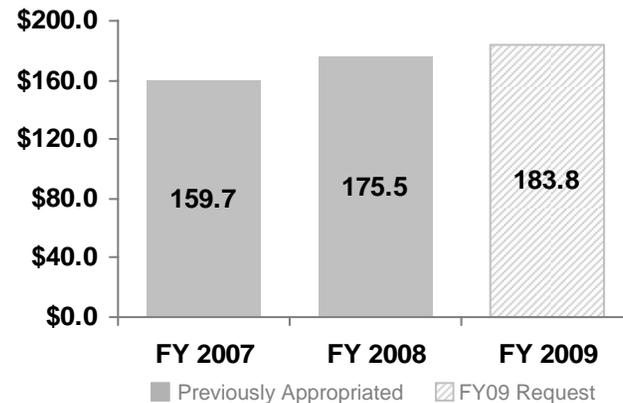
Funding Categories

- Aircraft
- Command, Control, Communications, Computers and Intelligence (C4I) Systems
- Ground Vehicles
- Missile Defense
- Mission Support
- Munitions and Missiles
- Science and Technology
- Shipbuilding and Maritime Systems
- Space Based and Related Systems

FY 2009 Strategic Modernization Breakdown *(\$ in billions)*



Total Annual Cost *(\$ in billions)*



*Numbers may not add due to rounding
This table does not include GWOT. Subsequent funding figures in this section include GWOT funding—see Major Weapons Systems Summary table for more information*

Major Weapons Systems

OVERVIEW

The combined capabilities and performance of U.S. weapons systems are unmatched throughout the world, ensuring that our military forces have the tactical edge over any adversary. To preserve and build upon this advantage, the Department's FY 2009 budget includes \$183.8 billion to continue its strategic modernization – \$104.2 billion for Procurement and \$79.6 billion for RDT&E.

The need for investment spending addresses DoD activity levels and the nature of the threats our warfighters face. Funding for weapons systems is typically higher in times of war or conflict. Yet, due to the constant evolution of threat conditions, the Department cannot defer its modernization effort without accepting unacceptable future risk. The FY 2009 budget represents the greatest investment since the Cold War in sustaining U.S. technological advantage (Figure 4.1). This is largely a result of significant transformation efforts underway to replace aging and outdated weapon systems and to modify existing weapons to address component obsolescence and improve performance against future threats.

Funding for weapon systems has a significant impact on our national economy and American technology. Defense acquisitions have been instrumental to developments in space communications and surveillance, the information and communications revolutions, the Internet, and advances in digital imagery. Over the past 50 years, many major fields of technological advance have been influenced by the Department's investments.

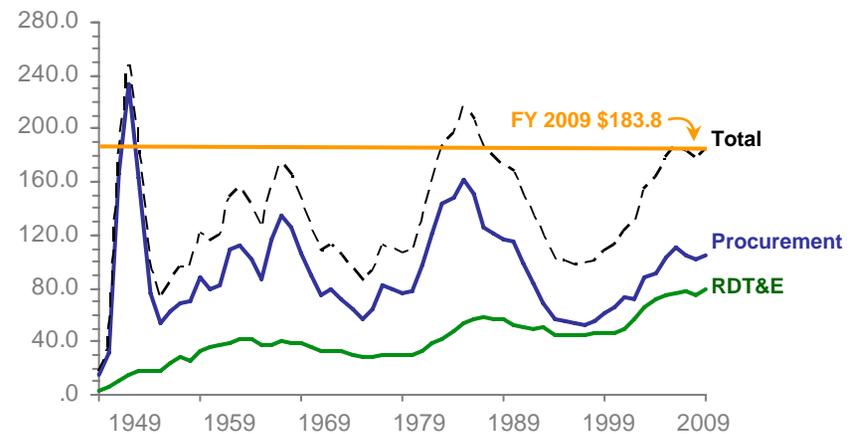
OVERSIGHT AND REFORM

The Defense Acquisition System is the management process by which the Department acquires weapon systems and automated

information systems. Its continuous objective is to rapidly acquire quality products that satisfy user needs with measurable improvements to reliability and capability at a fair and reasonable cost to the American taxpayer. Although the Defense Acquisition System provides flexibility and encourages innovation, it maintains a strict emphasis on discipline and accountability. It applies more stringent oversight to programs of increasing dollar value and management interest. The highest-profile programs are designated as Major Defense Acquisition Programs (MDAP) and Major Automated Information Systems (MAIS). Accordingly, they have the most extensive statutory and regulatory reporting requirements, requiring review by specific Office of the Secretary of Defense officials. Examples of MDAPs include the F-35 program and the Army's Future Combat Systems (FCS); these

Figure 4.1 Historical Acquisition Budget Authority (FY 1949 – 2009)

(FY 2008 \$ in Billions)



Source: Department of Defense National Defense Budget Estimates for FY 2008, Budget Authority by Title in Constant 2008 Dollars
FY 1949 – 2008 data includes supplementals, as applicable.
FY 2009 does not include any GWOT funding

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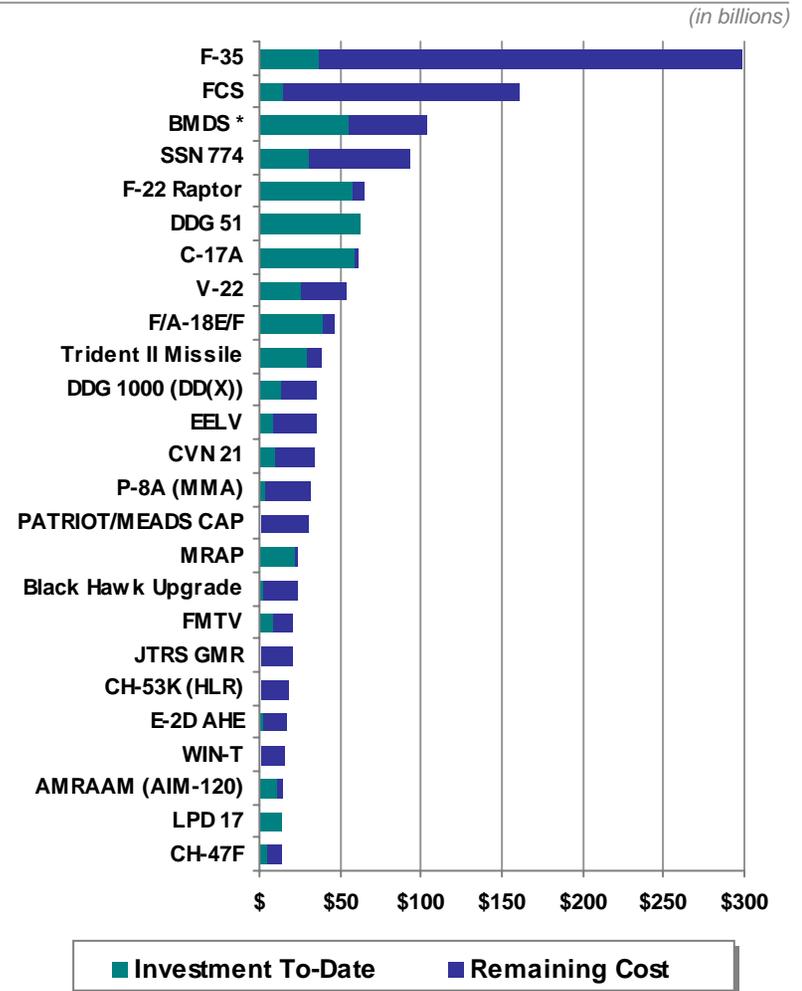
DoD FY 2009 Budget Request Summary Justification

two programs currently represent the largest MDAPs in the Department's portfolio (Figure 4.2).

To address cost, schedule, and performance issues, the Department is implementing multiple initiatives to improve our acquisition system. By advancing acquisition reform at both a strategic and tactical level, the goal is to strengthen every aspect of the Defense Acquisition System.

- **Workforce.** The Department is working to enhance and align the skills, size, and mix of the workforce with modern acquisitions challenges, recruit and retain superior talent, and continually reinforce the highest ethical standards. The Defense Acquisition University and the Industrial College of the Armed Forces both continue to improve their acquisition workforce training programs.
- **Acquisition:**
 - *Streamline and Simplify Acquisition:* Improve the quality and reduce the cycle time for decisions; achieve an earlier initial operational capability; and incrementally improve system performance.
 - *Create Affordable and Predictable Outcomes:* Bound the set of available choices by constraining the decision space to requirements, schedule, and cost; create an information management environment fostering open and transparent data.
 - *Improve Centers of Excellence:* Cultivate centers in Systems and Software Engineering, Program Management, Contracting, and Cost Estimation.
 - *Align Responsibility and Accountability:* Ensure that trust, integrity, and ethics are the cornerstones.
- **Requirements.** Clearly defined and stable requirements are critical to respond to capability needs on time and on cost.

Figure 4.2 Total Cost of Top 25 MDAPs



Source: Dec 2006 Selected Acquisition Reports

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* BMDS as reported in SAR, eventual costs beyond FYDP not known

DoD FY 2009 Budget Request Summary Justification

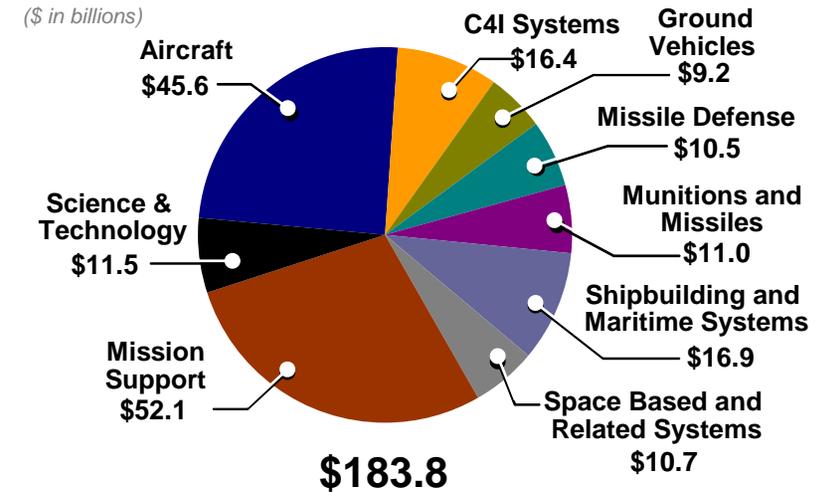
- **Budget.** The Department is trying to institute more realistic, cost effective plans and budgets. Funding to independent cost estimates will mitigate cost growth attributable to unrealistic program office estimates.
- **Industry.** The Department is committed to fostering broadened globalization, innovation, and competition through a series of efforts, including raising awareness of the capabilities of small companies and exploring opportunities for public/private partnering.
- **Organization.** The Department strives to enhance governance and decision-making by linking strategy to outcomes, clarifying decision-making responsibilities, focusing on strategic choices, improving the analytic framework, and providing business transparency.
- **Program Control.** Configuration Steering Boards will review all requirements changes and any significant technical configuration changes that have the potential to result in cost and schedule impacts to the program. Changes may not be approved unless funds are identified and schedule impacts mitigated.

WEAPON SYSTEM DETAILS

The Department's request for strategic modernization spans eight categories: Aircraft; Command, Control, Communications, Computers, and Intelligence (C4I) Systems; Ground Vehicles; Missile Defense; Munitions and Missiles; Shipbuilding and Maritime Systems; Space Based and Related Systems; Mission Support; and Science and Technology (Figure 4.3).

Mission Support includes thousands of critical technology and procurement items that the Department acquires annually to sustain an effective military force and retain a high level of readiness. They include, but are not limited to: small arms, night vision goggles, medical equipment, environmental pollution

Figure 4.3 FY 2009 Strategic Modernization Categories



Source: FY 2009 PRCP – Investment Categorization
Numbers may not add due to rounding

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control systems, training simulators, intelligence support, motor vehicles, and howitzers. A more detailed summary of these and ancillary mission support costs can be found in the RDT&E Program (R-1) and the Procurement Programs (P-1) exhibits, which are posted at the Department's website (DefenseLink.mil).

As discussed in the Justification chapter, the Department's Science and Technology investment responds to the present day needs of the Department and warfighter, while providing the foundation for superior future capabilities. The \$11.5 billion request includes \$1.7 billion for Basic Research.

Examples of major programs for each of these categories, with the exception of Mission Support and Science and Technology, are included in this section. The following summaries describe major weapons systems under development or production.

DoD FY 2009 Budget Request Summary Justification

Major Weapons Systems Summary (\$ in Millions)		FY 2007	FY 2008			FY 2009	Page	
		Actual*	Budget Enacted	GWOT Enacted	Subtotal Enacted	GWOT Remaining		Budget Request
Aircraft – Joint Service								
C-130	Hercules	2,074.0	1,531.5	–	1,531.5	1,442.6	956.6	162
RQ-4	Global Hawk	666.7	855.6	–	855.6	2.2	996.5	163
JCA	Joint Cargo Aircraft	87.1	183.4	–	183.4	–	299.4	163
F-35	Joint Strike Fighter	4,879.6	6,495.4	–	6,495.4	230.0	6,728.3	164
UAS	Predator and Reaper	916.3	599.4	–	599.4	200.9	795.3	164
V-22	Osprey	2,160.8	2,569.9	–	2,569.9	633.0	2,731.1	165
JPATS T-6A	JPATS T-6A Texan II	447.5	537.5	–	537.5	–	322.5	165
UAS	Shadow and Raven	293.6	209.4	–	209.4	257.6	60.7	166
Aircraft – USA								
AH-64	Apache	1,603.8	901.8	105.0	1,006.8	312.8	835.8	166
ARH	Armed Reconnaissance Helicopter	188.2	355.7	–	355.7	222.6	574.5	167
CH-47	Chinook	1,337.8	786.5	334.1	1,120.6	311.1	1,177.6	167
LUH	Light Utility Helicopter	148.4	228.9	–	228.9	–	224.5	168
UH-60	Black Hawk	1,394.9	977.2	483.3	1,460.5	44.4	1,097.0	168
Aircraft – USN/USMC								
E-2C/D	Hawkeye	696.3	866.4	–	866.4	1.0	1,127.4	169
E-6	Mercury	91.1	120.4	–	120.4	1.0	136.4	169
EA-18G	Growler	1,096.7	1,586.7	–	1,586.7	375.0	1,780.5	170
EA-6B	Prowler	296.3	73.6	–	73.6	209.4	140.3	170
F/A-18E/F	Hornet	2,776.0	2,124.5	–	2,124.5	769.5	1,982.5	171
H-1	Huey/Super Cobra	527.2	419.1	–	419.1	123.4	477.9	171
MH-60R	Multi-Mission Helicopter	941.9	1,067.3	–	1,067.3	205.0	1,256.1	172
MH-60S	Fleet Combat Support Helicopter	627.8	538.3	–	538.3	190.3	597.0	172
P-8A	Poseidon	1,100.0	862.3	–	862.3	–	1,242.6	173
VH-71	Executive Helicopter	613.9	225.4	–	225.4	–	1,047.8	173

*Includes GWOT appropriations

Numbers may not add due to rounding

DoD FY 2009 Budget Request Summary Justification

Major Weapons Systems Summary (\$ in Millions)		FY 2007	FY 2008			FY 2009	Page	
		Actual*	Budget Enacted	GWOT Enacted	Subtotal Enacted	GWOT Remaining		Budget Request
Aircraft – USAF								
A-10	Thunderbolt	318.7	170.0	–	170.0	313.5	144.1	174
B-2	Spirit	277.3	508.0	–	508.0	59.9	681.8	174
C-17	Globemaster	4,892.2	619.4	–	619.4	72.0	935.1	175
C-5	Galaxy	340.5	487.9	11.7	499.6	63.3	708.2	175
CSAR-X	Combat Search & Rescue Helicopter	103.7	94.4	–	94.4	–	320.1	176
F-16	Falcon	492.7	403.1	–	403.1	92.1	397.7	176
F-15E	Eagle	411.3	133.5	39.7	173.2	320.4	196.5	177
F-22	Raptor	4,000.0	4,417.9	–	4,417.9	–	4,081.5	177
KC-X	New Tanker	68.3	113.7	–	113.7	–	893.5	178
C4I – Joint Service								
JTRS	Joint Tactical Radio System	788.2	854.7	–	854.7	–	853.0	180
C4I – USA								
FCS	Future Combat Systems	3,378.1	3,436.9	–	3,436.9	–	3,557.7	180
SINGARS	Single Channel Ground & Airborne Radio	630.6	148.6	–	148.6	2,248.3	84.9	181
WIN-T	Warfighter Information Network – Tactical	119.3	320.1	–	320.1	–	702.0	181
Ground Vehicles – Joint Service								
JTLV	Joint Light Tactical Vehicle	29.3	78.9	–	78.9	20.0	66.2	183
MRAP	Mine Resistant Ambush Protected	5,400.0	–	13,464.0	13,464.0	–	–	183
Ground Vehicles – USA								
ASV	Armored Security Vehicle	461.9	282.3	1.5	283.8	309.4	195.4	184
FHTV	Family Of Heavy Tactical Vehicles	1,582.6	572.6	427.0	999.6	2,409.3	926.2	184
FMTV	Family Of Medium Tactical Vehicles	3,102.5	1,846.6	146.0	1,992.6	2,693.0	946.7	185
M1 Upgrade	Abrams Tank	2,590.6	620.6	425.0	1,045.6	1,466.7	727.7	185
Stryker	Stryker Family of Armored Vehicles	1,439.0	184.7	918.7	1,103.4	1,989.6	1,283.0	186

*Includes GWOT appropriations

Numbers may not add due to rounding

DoD FY 2009 Budget Request Summary Justification

		FY 2007	FY 2008			FY 2009		
Major Weapons Systems Summary			Budget	GWOT	Subtotal	GWOT	Budget	
(\$ in Millions)		Actual*	Enacted	Enacted	Enacted	Remaining	Request	Page
HMMWV	High Mobility Multi-purpose Wheeled Vehicle	3,237.5	1,139.1	455.0	1,594.1	1,774.4	989.7	186
Ground Vehicles – USN/USMC								
EFV	Expeditionary Fighting Vehicle	314.9	247.2	–	247.2	–	316.1	187
Missile Defense – Joint Service								
Patriot/MEADS	Patriot	322.9	370.0	–	370.0	–	462.3	189
Patriot/PAC–3	Patriot	511.1	480.5	–	480.5	–	523.3	189
Missile Defense	Missile Defense	9,433.6	8,709.0	–	8,709.0	–	9,431.5	190
Missiles and Munitions – Joint Service								
AMRAAM	Advanced Medium Range Air-Air Missile	242.0	316.1	–	316.1	0.8	504.3	192
AIM–9X	Air Intercept Missile - 9X	100.3	119.1	–	119.1	–	147.1	192
Chem–Demil	Chemical Demilitarization	1,403.0	1,617.0	–	1,617.0	–	1,620.0	193
JAGM	Joint Air to Ground Missile	–	67.9	–	67.9	–	180.8	194
JASSM	Joint Air-to-Surface Standoff Missile	189.5	172.1	–	172.1	23.0	253.3	194
JDAM	Joint Direct Attack Munition	301.7	145.4	5.0	150.4	18.1	115.0	195
JSOW	Joint Standoff Weapon	150.9	159.5	–	159.5	–	171.6	195
SDB	Small Diameter Bomb	246.8	248.6	–	248.6	27.9	277.9	196
Missiles and Munitions – USA								
Javelin	Javelin Advanced Tank Weapon	158.1	166.8	–	166.8	121.2	259.3	196
HIMARS	High Mobility Artillery Rocket System	295.9	267.6	–	267.6	67.2	391.1	197
Missiles and Munitions – USN								
ESSM	Evolved Seasparrow Missile	99.1	82.7	–	82.7	–	85.1	197
RAM	Rolling Airframe Missile	56.6	75.5	–	75.5	–	74.3	198
Standard	Standard Family of Missiles	314.1	385.4	–	385.4	–	462.7	198
Tomahawk	Tactical Tomahawk Cruise Missile	375.4	396.2	–	396.2	103.5	295.3	199

*Includes GWOT appropriations

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DoD FY 2009 Budget Request Summary Justification

		FY 2007	FY 2008			FY 2009		
Major Weapons Systems Summary			Budget	GWOT	Subtotal	GWOT	Budget	
(\$ in Millions)		Actual*	Enacted	Enacted	Enacted	Remaining	Request	Page
Trident II	Trident II Ballistic Missile	993.7	1,088.9	–	1,088.9	–	1,138.7	199
Shipbuilding and Maritime Systems – Joint Service								
JHSV	Joint High Speed Vessel	33.5	233.6	–	233.6	–	359.7	201
Shipbuilding and Maritime Systems – USN								
CVN-21	Carrier Replacement	1,410.6	3,377.5	–	3,377.5	–	4,188.1	201
DDG 1000	DDG 1000 Destroyer	3,354.3	3,536.2	–	3,536.2	–	3,232.6	202
LHA(R)	Landing Helicopter Assault Ship	1,144.3	1,371.6	–	1,371.6	–	2.4	202
LCS	Littoral Combat Ship	756.9	641.2	–	641.2	–	1,291.0	203
LPD-17	Amphibious Transport Dock Ship	387.8	1,502.0	–	1,502.0	–	104.2	203
SSN-774	Virginia Class Submarine	2,749.8	3,418.4	–	3,418.4	–	3,591.0	204
RCOH	CVN Refueling Complex Overhaul	1,067.1	295.3	–	295.3	–	628.0	204
T-AKE	Auxiliary Dry Cargo and Ammunition Ship	453.2	753.3	–	753.3	–	962.4	205
Space Based and Related Systems – USN								
MUOS	Mobile User Objective System	645.9	812.6	–	812.6	–	1,024.3	207
Space Based and Related Systems – USAF								
AEHF	Advanced Extremely High Frequency	617.3	731.5	–	731.5	–	404.6	207
EELV	Evolved Expendable Launch Vehicle	871.2	1,091.8	–	1,091.8	–	1,239.0	208
GPS	Global Positioning System	547.8	821.3	–	821.3	–	954.6	208
NPOESS	National Polar–Orbiting Operational Environmental Satellite System	343.3	332.5	–	332.5	–	289.5	209
SBIRS	Space Based Infrared System	684.4	982.6	–	982.6	–	2,328.2	209
TSAT	Transformational Satellite Communication	700.4	804.7	–	804.7	–	843.0	210
WGS	Wideband Global Satellite Communication	456.5	342.0	–	342.0	–	34.9	210

*Includes GWOT appropriations

Numbers may not add due to rounding

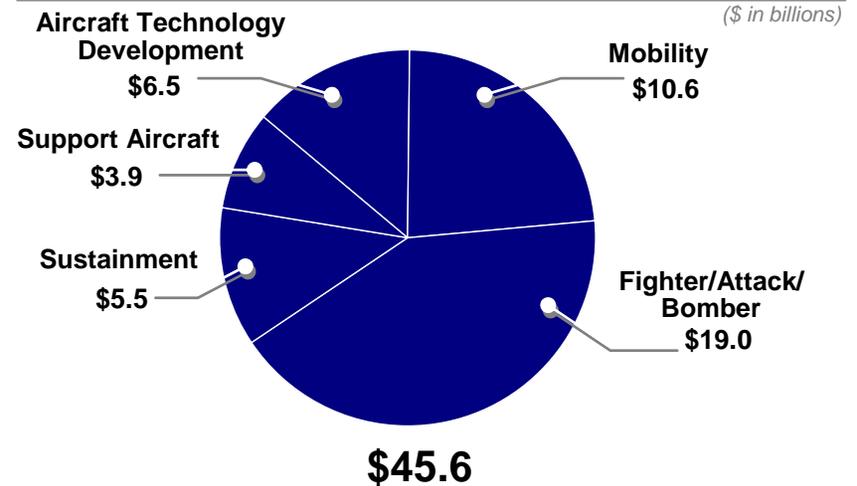
DoD FY 2009 Budget Request Summary Justification

Aircraft

Aviation forces — including fighter/attack, bomber, mobility (cargo/tanker) and specialized support aircraft — provide a versatile striking force capable of rapid deployment worldwide. These forces can quickly gain and sustain air dominance over regional aggressors, permitting rapid air attacks on enemy targets while providing security to exploit the air for logistics, command and control, intelligence, and other functions. Fighter/attack aircraft, operating from both land bases and aircraft carriers, combat enemy fighters and attack ground and ship targets. Bombers provide an intercontinental capability to rapidly strike surface targets. The specialized aircraft supporting conventional operations perform functions such as surveillance, airborne warning and control, air battle management, suppression of enemy air defenses, reconnaissance, and combat search and rescue. In addition to these forces, the U.S. military operates a variety air mobility forces including cargo, aerial-refueling aircraft, helicopters, and support aircraft.

Aircraft funding has continued to increase to support the procurement of aircraft such as the F-35 Joint Strike Fighter, the V-22, the new tanker program, the Navy's F/A-18 E/F and E/A-18G, and the Combat Search and Rescue Helicopter. The

FY 2009 Aircraft



Source: FY 2009 PRCP – Investment Categorization
Numbers may not add due to rounding

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FY 2009 budget also funds the last year of the three-year procurement for the F-22 and continues the recapitalization of the Department's legacy aircraft fleet.

AIRCRAFT

DoD FY 2009 Budget Request Summary Justification

C-130 Hercules



The C-130 Hercules is a tactical airlift aircraft modernizing the U.S. tactical airlift capability.

It is capable of performing a number of tactical airlift missions including deployment and redeployment of troops and/or supplies within/between command areas in a theater of operation, aeromedical evacuation, air logistic support and augmentation of strategic airlift forces.

Mission: The mission of the C-130 is the immediate and responsive air movement and delivery of combat troops and supplies directly into objective areas primarily through airlanding, extraction, and airdrop and the air logistic support of all theater forces.

FY 2009 Program: The budget continues the C-130J procurement for the Air Force with advance procurement funding beginning in FY 2009 to support aircraft in FY 2010, C-130 modifications, and two KC-130J USMC aircraft.

Prime Contractor: Lockheed Martin Corporation Marietta, GA

C-130 Hercules (Continued)

	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
USMC						
KC-130J	(3)	223.5	(4)	251.9	(2)	153.4
Subtotal	(3)	223.5	(4)	251.9	(2)	153.4
RDT&E, AF						
C-130	(-)	185.6	(-)	250.0	(-)	172.6
C-130J	(-)	34.8	(-)	73.8	(-)	52.4
Subtotal	(-)	220.4	(-)	323.8	(-)	225.0
TOTAL	(17)	2,074.0	(13)	1,531.5	(2)	956.6

C-130 Hercules

	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement						
Air Force						
C-130 Mods	(-)	448.1	(-)	212.6	(-)	422.8
C-130J	(14)	1,166.9	(9)	681.4	(-)	96.0
C-130J Mods	(-)	15.1	(-)	61.8	(-)	59.4
Subtotal	(14)	1,630.1	(9)	955.8	(-)	578.2

DoD FY 2009 Budget Request Summary Justification

RQ-4 Global Hawk

DOD - JOINT

The FY 2009 budget continues the transformation towards the development and



fielding of Unmanned Aircraft Systems (UAS). The RQ-4 Global Hawk system usually comprises an aircraft segment consisting of aircraft with an Integrated Sensor Suite (ISS) sensor payload, avionics, and data links; a ground segment consisting of a Launch and Recovery Element (LRE), and a Mission Control Element (MCE) with embedded ground communications equipment; a support element; and trained personnel.

Mission: The Global Hawk provides high altitude, near-real-time, high-resolution, ISR imagery. Once mission parameters are programmed, the aircraft can autonomously taxi, take off, fly, and remain on station capturing imagery, then return and land. Ground-based operators monitor UAV health and status, and can change navigation and sensor plans during flight as necessary.

FY 2009 Program: The FY 2009 budget supports five aircraft, appropriate payloads for each block configuration, two ground segments, and integrated logistics support.

Prime Contractor: Northrop Grumman Corporation, San Diego, CA

RQ-4 Global Hawk

	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement	(5)	442.6	(5)	580.9	(5)	712.2
RDT&E	(-)	224.1	(-)	274.7	(-)	284.3
Total	(5)	666.7	(5)	855.6	(5)	996.5

Joint Cargo Aircraft

DOD - JOINT

The Joint Cargo Aircraft (JCA) is a joint Army/Air Force program that will procure an intra-theater light cargo fixed wing airlift platform that will meet the warfighter needs for intra-theater airlift. The aircraft will be a commercial derivative aircraft that meets the Army's immediate requirements and provides the Air Force an additional capability in meeting intra-theater airlift missions.



Mission: The JCA will provide responsive, flexible, and tailored airlift for combat, humanitarian operations, and homeland defense.

FY 2009 Program: The FY 2009 budget procures seven aircraft for the Army and continues JCA testing efforts for the Air Force.

Prime Contractors: L-3 Communications Integration Systems, Greenville, TX

Joint Cargo Aircraft

	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement						
Army	(2)	71.9	(4)	156.0	(7)	264.2
Air Force	(-)	-	(-)	-	(-)	5.4
Subtotal	(2)	71.9	(4)	156.0	(7)	269.6
RDT&E						
Army	(-)	5.4	(-)	6.5	(-)	3.0
Air Force	(-)	9.8	(-)	20.9	(-)	26.8
Subtotal	(-)	15.2	(-)	27.4	(-)	29.8
Total	(2)	87.1	(4)	183.4	(7)	299.4

DoD FY 2009 Budget Request Summary Justification

F-35 Joint Strike Fighter

DOD - JOINT

The F-35 Joint Strike Fighter (JSF) is the next-generation strike fighter for the Air Force, Marine Corps, Navy & U.S. Allies. The JSF consists of three variants: Conventional Take-Off and Landing (CTOL), Short Take-Off and Vertical Landing (STOVL), and Carrier (CV).



Mission: The JSF will replace the Air Force A-10 and F-16, Marine Corps AV-8B and F/A-18 C/D and complement the F/A-18E/F and F-22 aircraft. The JSF will provide all-weather, precision, stealthy, air-to-air and ground strike capability, including direct attack on the most lethal surface-to-air missiles and air defenses.

FY 2009 Program: Procures eight CTOL aircraft for the Air Force and eight STOVL aircraft for the Marine Corps.

Prime Contractors: Lockheed Martin Corporation
Pratt & Whitney; General Electric/Rolls Royce
Fighter Engine Team

F-35 Joint Strike Fighter

	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement						
Navy	(-)	124.5	(6)	1,223.8	(8)	1,860.9
Air Force	(2)	571.7	(6)	1,412.1	(8)	1,810.7
Subtotal	(2)	696.2	(12)	2,635.9	(16)	3,671.6
RDT&E						
Navy	(-)	2,109.4	(-)	1,868.0	(-)	1,532.7
Air Force	(-)	2,074.0	(-)	1,991.5	(-)	1,524.0
Subtotal	(-)	4,183.4	(-)	3,859.5	(-)	3,056.7
Total	(2)	4,879.6	(12)	6,495.4	(16)	6,728.3

UAS Predator and Reaper

DOD - JOINT

These Medium Altitude unmanned systems usually include an aircraft segment comprised of a multi-spectral targeting systems, sensor payloads, avionics, and data links. A ground and support segment includes the ground control station, which supports the mission, launch and recovery element.



Mission: Primarily reconnaissance against critical, perishable targets at a medium altitude for long endurance. It is equipped with numerous sensors, including synthetic aperture radar (SAR) permeating smoke, clouds, or haze. Both Predator and Reaper are capable of full motion video; the SAR also produces still frame radar images.

FY 2009 Program: The budget contributes to development and fielding of systems like Predator, Reaper and Warrior.

Prime Contractor: General Atomics-Aeronautical Systems Inc.,
San Diego, CA

UAS Predator and Reaper

	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement						
Predator MQ-1 (AF)	(48)	428.5	(24)	276.1	(38)	378.2
Reaper MQ-9 (AF)	(12)	247.6	(4)	58.1	(9)	161.4
Warrior (Army)	(-)	38.6	(12)	122.7	(12)	174.6
Subtotal	(60)	714.7	(40)	456.9	(59)	714.2
RDT&E						
Predator MQ-1 (AF)	(-)	77.9	(-)	33.8	(-)	24.8
Reaper MQ-9 (AF)	(-)	(-)	(-)	63.9	(-)	43.6
Warrior (Army)	(17)	123.7	(-)	44.8	(-)	12.7
Subtotal	(17)	201.6	(-)	142.5	(-)	81.1
Total	(76)	916.3	(40)	599.4	(59)	795.3

DoD FY 2009 Budget Request Summary Justification

V-22 Osprey

DOD - JOINT

The V-22 Osprey is a tilt-rotor, vertical takeoff and landing aircraft to meet the differing needs of the Marine Corps, SOCOM, and the U.S. Navy. The procurement objective is 458 aircraft divided between the components. The MV-22 replaces the CH-46E and CH-53D helicopters.



Mission: The V-22 mission includes airborne assault, vertical lift, combat search and rescue, and special operations.

FY 2009 Program: Supports procurement of 30 MV-22 and six CV-22 aircraft.

Prime Contractors:

Textron, Inc. Bell Helicopter Division, Fort Worth, TX
Boeing Vertol, Philadelphia, PA

V-22 Osprey

	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement						
MV-22 (USMC)	(14)	1,557.4	(21)	1,946.1	(30)	2,220.4
CV-22 (AF/SOCOM)	(3)	339.0	(5)	491.7	(6)	423.3
Subtotal	(17)	1,896.4	(26)	2,437.8	(36)	2,643.7
RDT&E						
Navy (USMC)	(-)	251.6	(-)	115.5	(-)	68.8
AF/SOCOM	(-)	12.8	(-)	16.6	(-)	18.6
Subtotal	(-)	264.4	(-)	132.1	(-)	87.4
Total	(17)	2,160.8	(26)	2,569.9	(36)	2,731.1

JPATS T-6A Texan II

DOD - JOINT

The Joint Primary Aircraft Training System (JPATS) is a joint Navy/Air Force program that will use the T-6A Texan as a replacement for the Service's fleets of primary trainer aircraft (T-34 and T-37, respectively) and associated Ground Based Training Systems. The T-6 Texan II is a tandem seat, turboprop aircraft derivative of the Pilatus PC-9 powered by a single Pratt & Whitney PT6A-68 engine.



Mission: Supports joint Navy and Air Force specialized undergraduate pilot training.

FY 2009 Program: The program includes the purchase of aircraft, simulators, ground-based training devices, training management systems, instructional courseware, and logistics support. The budget supports procurement of 44 T-6B Texan II JPATS aircraft and associated training systems for the Navy and dedicated prime contractor support for the Air Force.

Prime Contractor: Raytheon/Hawker Beechcraft Corporation, Wichita, KS

JPATS T-6A Texan II

	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement						
Air Force	(48)	302.5	(39)	244.2	(-)	33.2
Navy	(20)	145.0	(44)	293.3	(44)	289.3
Total	(68)	447.5	(83)	537.5	(44)	322.5

DoD FY 2009 Budget Request Summary Justification

UAS – Shadow and Raven

The FY 2009 budget continues transformation towards development and fielding of Unmanned Aircraft Systems.

Mission:

Shadow provides the tactical maneuver commander near-real-time reconnaissance, surveillance, target acquisition, and force protection during day/night and limited adverse weather conditions. Raven is an “over the hill” rucksack-portable, day/night, limited adverse-weather, remotely operated, multi-sensor system in support of combat as well as some combat support units.

FY 2009 Program: The FY 2009 budget provides procurement funds for multiple variations of quantities for the small unmanned aircraft, system hardware, contractor logistics support, and new equipment training.

Prime Contractors: AeroVironment

UAS – Shadow and Raven

	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement						
Shadow (Army)	(64)	226.3	(8)	72.7	(–)	–
Shadow (USMC)	(8)	35.7	(20)	89.6	(4)	20.5
Raven (Army)	(333)	15.5	(702)	33.3	(504)	30.0
Subtotal	(405)	277.5	(730)	195.6	(508)	50.5
RDT&E						
Shadow (Army)	(–)	16.1	(–)	7.9	(–)	8.2
Raven (Army)	(–)	–	(–)	5.9	(–)	2.0
Subtotal	(–)	16.1	(–)	13.8	(–)	10.2
Total	(405)	293.6	(730)	209.4	(508)	60.7



AH–64 Apache

The Apache program includes the Longbow Apache, which consists of a mast mounted Fire Control Radar (FCR) integrated into an upgraded and enhanced AH–64 airframe. This program also provides Target Acquisition Designation Sight (TADS) and Pilot Night Vision Sensors (PNVS), and other safety and reliability enhancements.

Mission: The AH–64 provides a fire-and-forget HELLFIRE air-to-ground missile capability, modernized target acquisition and night vision capabilities, and transitions the Apache, greatly increasing weapon system effectiveness and aircraft survivability.

FY 2009 Program: The budget request supports the remanufacturing of AH–64A aircraft to an AH–64D (Longbow) configuration.

Prime Contractors:

Integration: Northrop-Grumman, Baltimore, MD
Lockheed Martin Corporation, Owego, NY

Longbow Apache: Boeing Aircraft Corporation, Mesa, AZ

AH–64 Apache

	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement	(–)	1,484.9	(–)	814.3	(–)	637.4
RDT&E	(–)	118.9	(–)	192.5	(–)	198.4
Total	(–)	1,603.8	(–)	1,006.8	(–)	835.8

DoD FY 2009 Budget Request Summary Justification

ARH Armed Reconnaissance Helicopter

USA

The Armed Reconnaissance Helicopter (ARH) is a scout helicopter replacing the OH-58 Kiowa Warrior. It will perform reconnaissance and provide combat operations security. The program is currently in System Development and Demonstration (SDD).



Mission: The mission of the ARH is to conduct aerial armed reconnaissance, gaining actionable combat information to enable joint/combined air-ground maneuvers including mobile strike, close combat and vertical operations across the full spectrum of military operations. Armed reconnaissance, which includes reconnaissance and security, involves the capability to suppress ground forces, and, if necessary, to gain battlefield information without engaging in a major fight.

FY 2009 Program: The budget request supports continued production of 28 aircraft.

Prime Contractor: Bell Helicopter Textron, Fort Worth, TX

	Armed Reconnaissance Helicopter					
	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement	(-)	-	(10)	174.6	(28)	438.8
RDT&E	(-)	188.2	(-)	181.1	(-)	135.7
Total	(-)	188.2	(10)	355.7	(28)	574.5

CH-47 Chinook

USA

The CH-47F Chinook program procures 513 aircraft – 378 remanufactured CH-47F models, 74 new build CH-47Fs, and 61 remanufactured Special Operations MH-47Gs.



Primary upgrades include a new digital cockpit and modifications to the airframe. The upgraded cockpit will include enhanced communications and navigation equipment for improved mission performance and survivability. Airframe structural modifications will reduce harmful vibrations, lowering operation and support costs. Other airframe modifications reduce the time required for aircraft tear-down and build-up after deployment by about 60 percent. Installation of a more powerful engine will improve fuel efficiency and significantly enhance lift performance.

Mission: To provide a system designed to transport ground forces, supplies, ammunition, and other battle-critical cargo in support of worldwide combat and contingency operations.

FY 2009 Program: The budget request supports acquisition of 16 (new build) as well as remanufactured aircraft.

Prime Contractor: Boeing Aircraft Corporation, Philadelphia PA

	CH-47 Chinook					
	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement	(-)	-	(6)	189.6	(16)	443.5
Modifications	(-)	1,308.8	(-)	910.0	(-)	724.2
RDT&E	(-)	29.0	(-)	21.0	(-)	9.9
Total	(-)	1,337.8	(6)	1,120.6	(16)	1,177.6

DoD FY 2009 Budget Request Summary Justification

LUH Light Utility Helicopter



The Light Utility Helicopter (LUH) replaces the UH-1 and the OH-58 Kiowa Warrior. It provides reliable and sustainable general and administrative support in permissive environments at reduced acquisition and operating costs. There is no RDT&E funding required for this program. The LUH acquisition strategy provides for the competitive procurement of a commercial off-the-shelf, non-developmental aircraft.

Mission: The Light Utility Helicopter provides organic general support at Corps and Division levels. The primary mission for the LUH is to provide aerial transport for logistical and administrative support.

FY 2009 Program: The budget request supports the continued production of 36 aircraft.

Prime Contractor: European Aeronautic Defence and Space Company (EADS)

LUH Light Utility Helicopter						
	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement	(26)	148.4	(43)	228.9	(36)	224.5
Total	(26)	148.4	(43)	228.9	(36)	224.5

UH-60 Black Hawk



The UH-60 Black Hawk is a twin engine, single-rotor helicopter that is designed to carry a crew of four and a combat equipped squad of eleven or an equal cargo load. It is also capable of carrying external loads of up to 6,000 lbs.

Mission: The Black Hawk provides a highly maneuverable, air-transportable, troop-carrying helicopter for all intensities of conflict, without regard to geographical location or environmental conditions. It moves troops, equipment, and supplies into combat and performs aero-medical evacuation and multiple functions in support of the Army's air mobility doctrine for deployment of ground forces.

FY 2009 Program: The budget request supports continued production of 63 aircraft.

Prime Contractor: Sikorsky Aircraft, Stratford, CT

UH-60 Black Hawk						
	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement	(66)	1,271.9	(78)	1,364.8	(63)	1,063.1
RDT&E	(-)	123.0	(-)	95.7	(-)	33.9
Total	(66)	1,394.9	(78)	1,460.5	(63)	1,097.0

DoD FY 2009 Budget Request Summary Justification

E-2C/D Hawkeye

The E-2C/D (Early Warning) Hawkeye is an all-weather twin engine, carrier-based, airborne early warning aircraft designed to extend task force defense perimeters.



Mission: The E-2C/D provides advance warning of approaching enemy surface units and aircraft to vector interceptors or strike aircraft to attack. They provide area surveillance, intercept, strike/air traffic control, radar surveillance, search and rescue assistance, communication relay, and automatic tactical data exchange. The E-2D is the next generation of the E-2C aircraft and will provide the long range air and surface picture, theater air and missile defense, and an expanded littoral capability.

FY 2009 Program: The request procures three Low Rate Initial Production E-2D aircraft. The RDT&E funding for the E-2D supports new radar development, system obsolescence, testing and communication component replacements, operator workstations, and a Multi-level Security Open Architecture. FY 2007 was the last year of the E-2C multiyear procurements.

Prime Contractors:

Airframe: Northrop Grumman, St. Augustine, FL
Engine: Rolls-Royce Corporation, Indianapolis, IN

E-2C/D Hawkeye

	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement	(2)	202.7	(-)	52.2	(3)	589.1
RDT&E	(-)	493.6	(3)	814.2	(-)	538.3
Total	(2)	696.3	(3)	866.4	(3)	1,127.4

E-6 Mercury

The E-6 Mercury aircraft is a uniquely configured Boeing 707 supporting Take Charge and Move Out (TACAMO), Airborne Command Post (ABNCP) and Airborne Launch Control System (ALCS) 24/7. It has an endurance of 15+ hours without refueling and a maximum endurance of 72 hours with in-flight refueling. Mission range is over 6,000 Nautical Miles.



Mission: The missions of the E-6 TACAMO aircraft are to provide survivable, endurable, reliable airborne command, control, and communications.

FY 2009 Program: The budget request supports the E-6 aircraft mission modernization equipment. Funding will support the modifications of all 16 aircraft in the TACAMO fleet, along with the Service Life Assessment Program and the Service Life Extension Program.

Prime Contractors:

Airframe: Boeing Aircraft Corporation, Wichita, KS
Block I: Rockwell Collins, Richardson, TX

E-6 Mercury

	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement	(-)	54.7	(-)	84.6	(-)	88.9
RDT&E	(-)	36.4	(-)	35.8	(-)	47.5
Total	(-)	91.1	(-)	120.4	(-)	136.4

DoD FY 2009 Budget Request Summary Justification

EA-18G Growler

The EA-18G Growler is the fourth major variant of the F/A-18 family of aircraft. The EA-18G is the Navy's replacement for the EA-6B, with an Airborne Electronic Attack (AEA) capability to detect, identify, locate, and suppress hostile emitters. It can operate autonomously or as a major node in a network-centric operation and will provide accurate targeting for suppression weapons such as the High-Speed Anti-Radiation Missile (HARM).

Mission: The EA-18G mission is to provide an Airborne Electronic Attack capability in support of naval strike forces.

FY 2009 Program: The budget request supports the fifth year (FY 2005-2009) of the Multi-Year Procurement (MYP) with the procurement of 22 EA-18G aircraft. The MYP is split between the EA-18G and the F/A-18E/Fs. The contract has a variation quantity clause permitting an additional six aircraft per year. Since the EA-18G is a modified F/A-18F, some support costs are common and are managed in the F/A-18E/F budgeted line.

Prime Contractors

Airframe: Boeing Aircraft Corporation, St. Louis, MO
Engine: General Electric Company
 Aircraft Engine Division, Lynn, MA



EA-6B Prowler

The EA-6B Prowler is a four-seat twin engine derivative of the A-6 Attack aircraft. The EA-6B can carry any mix of pods, including fuel tanks and/or HARM anti-radiation missiles, depending on requirements.

Mission: The EA-6B Prowler is a unique national asset that can be deployed from land bases and is included in every aircraft carrier deployment. This aircraft provides airborne electronic attack capability, tactically controlling the electromagnetic environment and degrading, deceiving, denying, and destroying adversary radar and communication capabilities in support of Navy and Marine Corps strike forces.

FY 2009 Program: The budget request supports the procurement of Low Band Transmitters to provide an expanded jamming capability against modern integrated air defense systems, as well as current asymmetric threats. The overall goals of the modification program are to upgrade the airframe structure and avionics systems, increase the life of the aircraft, and to expand the aircraft's jamming capabilities.

Prime Contractors: Northrop Grumman Corporation
 Bethpage, NY



EA-18G Growler

	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement	(9)	735.7	(18)	1,308.2	(22)	1,651.6
RDT&E	(-)	361.0	(-)	278.5	(-)	128.9
Total	(9)	1,096.7	(18)	1,586.7	(22)	1,780.5

EA-6B Prowler

	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement	(-)	227.6	(-)	30.4	(-)	33.4
RDT&E	(-)	68.7	(-)	43.2	(-)	106.9
Total	(-)	296.3	(-)	73.6	(-)	140.3

DoD FY 2009 Budget Request Summary Justification

F/A-18E/F Hornet



The F/A-18E/F Strike Fighter is a twin-engine, mid-wing, multi-mission tactical aircraft for deployment in Navy fighter and attack squadrons. Through selected external equipment, the F/A-18E/F can accomplish fighter and attack missions. It also possesses enhanced-range, payload, and survivability features, compared with the prior C/D models.



Mission: This strike fighter can perform traditional missions of fighter escort and fleet air defense, interdiction, and close air support, while still retaining excellent fighter and self-defense capabilities.

FY 2009 Program: The budget request supports the fifth year (FY 2005-2009) of the Multi-Year Procurement (MYP) with the purchase of 23 F/A-18E/F aircraft. This contract is currently funded at a minimum yearly quantity of 42 aircraft, and the procurement is split between the F/A-18E/F and the EA-18G aircraft models. The contract has a variation quantity clause permitting an additional six aircraft per year. The F/A-18E/F and the EA-18G have some of the same support costs, which are managed in the F/A-18E/F budget line.

Prime Contractors:

- Airframe:** Boeing Aircraft Corporation, St. Louis, MO
- Engine:** General Electric Aircraft Engine Division, Lynn, MA

F/A-18E/F Hornet						
	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement	(37)	2,737.1	(24)	2,074.9	(23)	1,911.3
RDT&E	(-)	38.9	(-)	49.6	(-)	71.2
Total	(37)	2,776.0	(24)	2,124.5	(23)	1,982.5

H-1 Huey/Super Cobra



The H-1 Helicopter Upgrade program converts AH-1W and UH-1N helicopters to the AH-1Z and UH-1Y, respectively. The upgraded helicopters will have increased maneuverability, speed, and payload capability. The upgrade scope includes a new four-bladed rotor system, new transmissions, a new four-bladed tail rotor and drive system, and upgraded landing gear.



Mission: The H-1 Upgrades provide offensive air support, utility support, armed escort, and airborne command and control during naval expeditionary operations or joint and combined operations.

FY 2009 Program: The budget request provides for the production of 20 aircraft.

Prime Contractor: Bell Helicopter Division, Fort Worth, TX

H-1 Upgrade						
	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement	(11)	493.7	(15)	415.6	(20)	474.1
RDT&E	(-)	33.5	(-)	3.5	(-)	3.8
Total	(11)	527.2	(15)	419.1	(20)	477.9

DoD FY 2009 Budget Request Summary Justification

MH-60R Multi-Mission Helicopter



The MH-60R Multi-Mission Helicopter Upgrade program ensures battle



group protection, and adds significant capability in coastal littorals and regional conflicts. The upgrade scope includes new H-60 Series airframes, significant avionics improvements, enhancements to the acoustic suite, new radars, and an improved electronics surveillance system.

Mission: The MH-60R will be the forward deployed fleet's primary anti-submarine and anti-surface warfare platform.

FY 2009 Program: The budget request continues to support a multi-year procurement from FY 2007-2011.

Prime Contractors:

- Airframe:** Sikorsky Aircraft, Stratford, CT
- Avionics:** Lockheed Martin Corporation, Owego, NY

MH-60R Multi-Mission Helicopter						
	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement	(25)	913.0	(27)	990.8	(31)	1,185.8
RDT&E	(-)	28.9	(-)	76.5	(-)	70.3
Total	(25)	941.9	(27)	1,067.3	(31)	1,256.1

MH-60S Fleet Combat Support Helicopter



The MH-60S is a versatile twin-engine helicopter used to maintain forward deployed fleet sustainability through rapid airborne delivery of materials and personnel, to support amphibious operations through search and rescue coverage and to provide organic airborne mine countermeasures.



Mission: The MH-60S conducts Vertical Replenishment (VERTREP), day/night ship-to-ship, ship-to shore, and shore-to-ship external transfer of cargo; internal transport of passengers, mail and cargo, vertical onboard delivery; air operations; and day/night search and rescue. Organic Airborne Mine Countermeasures (OAMCM) have been added as a primary mission for the MH-60S. Five separate sensors will be integrated into the MH-60S helicopter to provide Carrier Battle Groups and Amphibious Readiness Groups with an OAMCM capability.

FY 2009 Program: The budget request continues to support a five-year procurement from FY 2007-2011.

Prime Contractor: Sikorsky Aircraft, Stratford, CT

MH-60S Fleet Combat Support Helicopter						
	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement	(18)	546.3	(18)	500.2	(18)	549.7
RDT&E	(-)	81.5	(-)	38.1	(-)	47.3
Total	(18)	627.8	(18)	538.3	(18)	597.0

DoD FY 2009 Budget Request Summary Justification

P-8A Poseidon



The P-8A Poseidon is an all-weather, twin engine, land-based, network enabled, maritime patrol aircraft designed to sustain and improve armed maritime and littoral Intelligence, Surveillance, and Reconnaissance capabilities in traditional, joint, and combined roles to counter changing and emerging threats. P-8A is based on the 737 airframe.



Mission: The P-8A Multi-mission Maritime Aircraft (MMA), an aircraft based on the Boeing's 737-800 ERX, is persistent Anti-Submarine Warfare (ASW) and Anti-Surface Warfare (ASuW). The MMA, a P-3C replacement, will sustain and improve armed maritime and littoral Intelligence, Surveillance, and Reconnaissance capabilities for U.S. Naval Forces in traditional, joint, and combined roles to counter changing and emerging threats. MMA will have a substantial role in Sea Power 21 and will satisfy several mission requirements in Sea Shield, Sea Strike, and FORCEnet.

FY 2009 Program: The budget request is for new start funding for production line slots and required advanced procurement items for P-8A aircraft.

Prime Contractors:

Airframe: Boeing Aircraft Corporation, Seattle, WA

Engine: CFM International, GE Aviation and SNECMA

	P-8A Poseidon					
	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement	(-)	-	(-)	-	(-)	110.6
RDT&E	(-)	1,100.0	(-)	862.3	(-)	1,132.0
Total	(-)	1,100.0	(-)	862.3	(-)	1,242.6

VH-71 Executive Helicopter



The VH-71 Executive helicopter is the replacement for the VH-3D and VH-60N.



The global nature of the commitments requires the aircraft to deploy worldwide and operate in varying environments and climatic conditions without mission degradation.

Mission: To provide safe and timely transportation for the President and Vice President of the United States, heads of state, and others as directed by the White House Military Office.

FY 2009 Program: The budget provides for continued development of the program.

Prime Contractor: Lockheed Martin Corporation, Marietta, GA

	VH-71 Executive Helicopter					
	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
RDT&E	(-)	613.9	(-)	225.4	(-)	1,047.8
Total	(-)	613.9	(-)	225.4	(-)	1,047.8

DoD FY 2009 Budget Request Summary Justification

A-10 Thunderbolt

The A-10 Thunderbolt is the first aircraft designed for close air support of ground forces and is capable of delivering a full range of air-to-ground munitions as well as self defense air-to-air missiles. It is a twin-engine aircraft that can be used against all ground targets, including tanks and armored vehicles.



Mission: The primary mission of the A-10 is to provide day and night close air combat support for land forces. The A-10 has a secondary mission of supporting search and rescue and Special Forces operations. It also possesses a limited capability to perform certain types of interdiction. All of these missions may take place in a high or low threat environment.

FY 2009 Program: Continues to modernize the A-10 aircraft. The primary modifications funded in FY 2009 are Precision Enhancement and Wing Replacement.

Prime Contractor: Lockheed Martin Systems Integration, Owego, NY

	A-10 Thunderbolt					
	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement	(-)	276.2	(-)	168.0	(-)	144.1
RDT&E	(-)	42.5	(-)	2.0	(-)	(-)
Total	(-)	318.7	(-)	170.0	(-)	144.1

B-2 Spirit

The B-2 Spirit is an inter-continental bomber that employs low observable technology to achieve its mission. The bomber is an all-wing aircraft with twin weapon bays. The B-2's low observability is derived from a combination of reduced infrared, acoustic, electromagnetic, visual, and radar signatures. The dramatically reduced sum of these signatures makes it difficult for today's sophisticated defensive systems to detect, track, and engage the B-2. The B-2 is capable of delivering massive firepower in a short time, anywhere in the world through high-threat defenses, using both conventional and nuclear munitions.



Mission: The primary mission of the B-2 is to enable any theater commander to hold at risk and, if necessary, attack an enemy's war-making potential, especially time-critical targets that, if not destroyed in the first hours or days of a conflict, would allow unacceptable damage to be inflicted on the friendly side. The B-2 will also retain its potential as a nuclear bomber, reinforcing the deterrence of nuclear conflict.

FY 2009 Program: The FY 2009 program continues the modification of the B-2 aircraft, including upgrades to the radar system.

Prime Contractor: Northrop-Grumman Corporation, El Segundo, CA

	B-2 Spirit					
	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement	(-)	62.7	(-)	212.1	(-)	330.4
RDT&E	(-)	214.6	(-)	295.9	(-)	351.4
Total	(-)	277.3	(-)	508.0	(-)	681.8

DoD FY 2009 Budget Request Summary Justification

C-17 Globemaster

The C-17 Globemaster is a wide-body aircraft capable of airlifting outsized and oversized payloads over intercontinental ranges, with or without in-flight refueling. Its capabilities include rapid direct delivery of forces by airland or airdrop into austere tactical environments with runways as short as 3,000 feet. The C-17 is capable of performing both inter-theater and intra-theater airlift missions.



Mission: The C-17 provides outsize intra-theater airland/airdrop capability not available in the current airlift force. It provides rapid strategic delivery of troops and all types of cargo to main operating bases or directly to forward bases in the deployment area.

FY 2009 Program: The FY 2009 budget funds residual support equipment, training, and data requirements for the new C-17s; retrofits to existing aircraft; and installation of Large Aircraft Infrared Countermeasures. There are sufficient C-17s to support our Nation's military airlift requirements as determined by the 2005 Mobility Capabilities Study.

Prime Contractors: Boeing Aircraft Corporation, Long Beach, CA
Pratt & Whitney Corporation, East Hartford, CT

C-17 Globemaster						
	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement	(22)	4,721.7	(-)	438.8	(-)	699.1
RDT&E	(-)	170.5	(-)	180.6	(-)	236.0
Total	(22)	4,892.2	(-)	619.4	(-)	935.1

C-5 Galaxy

The C-5 Galaxy is the U.S. military's largest aircraft. Using front and rear cargo openings, the Galaxy can be loaded and off-loaded at the same time. Both nose and rear doors open the full width and height of the cargo compartment.



Mission: The C-5 is a heavy cargo transport designed to provide strategic inter-theater airlift for deployment and supply of combat and support forces. It can carry fully equipped, combat-ready troops to any area in the world on short notice and provide full field support necessary to maintain a fighting force.

FY 2009 Program: The FY 2009 budget continues the two-phase modernization effort that will improve aircraft reliability, maintainability, and availability. Phase I is the Avionics Modernization Program (AMP) and Phase II is the Reliability Enhancement & Reengining Program (RERP), pending an evaluation of alternatives to the RERP program and negotiations with the prime contractor on minimum costs.

Prime Contractor: Lockheed Martin Corporation, Marietta, GA

C-5 Galaxy						
	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement	(-)	202.9	(-)	320.6	(-)	583.1
RDT&E	(-)	137.6	(-)	179.0	(-)	125.1
Total	(-)	340.5	(-)	499.6	(-)	708.2

DoD FY 2009 Budget Request Summary Justification

Combat Search and Rescue Helicopter 

The CSAR-X Combat, Search and Rescue Helicopter will replace the current fleet of HH-60G Pave Hawk helicopters, which are quickly approaching the limit of their economically useful service life. The CSAR-X will provide personnel recovery forces with a medium-lift, vertical take-off and landing aircraft quickly deployable (via C-5, C-17, or self-deployable) and capable of main base and austere location operations for worldwide personnel recovery missions.

Mission: The primary mission of the CSAR-X is to recover downed aircrew and isolated personnel. Rescue forces may also conduct other missions inherent in their capabilities to conduct Personnel Recovery, such as non-conventional assisted recovery, non-combatant evacuation operations, civil search and rescue, international aid, emergency medical evacuation, disaster/humanitarian relief, and insertion/extraction of combat forces.

FY 2009 Program: The budget provides funding for the continued system design and development of the CSAR-X aircraft system. This program is one of three pilots in the "Capital Funding" initiative.

Prime Contractor: Currently in Source Selection

CSAR-X Combat Search and Rescue

	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement	(-)	-	(-)	-	(-)	15.0
RDT&E	(-)	103.7	(-)	94.4	(-)	305.1
Total	(-)	103.7	(-)	94.4	(-)	320.1

F-16 Falcon 

The F-16 Falcon is a single-seat, fixed-wing, high-performance fighter aircraft powered by a single engine. Advanced technology features include a blended wing body, reduced static margin, and a fly-by-wire flight control system.



Mission: The F-16 aircraft is a lightweight, high performance, multipurpose fighter capable of performing a broad spectrum of tactical air warfare tasks at an affordable cost well into the next century. F-16 aircraft provide high-performance air-to-air and air-to-surface attack capability.

FY 2009 Program: FY 2009 continues to fund the development and procurement of modifications to upgrade the F-16. The primary modifications in FY 2009 include engine upgrades, upgrades to the Modular Mission Computer and Falcon Star, which replaces known life-limited structure to preclude the onset of widespread fatigue damage, maintain safety of flight, enhance aircraft availability, and extend the life of affected components.

Prime Contractors: Lockheed-Martin Corporation, Fort Worth, TX
Pratt & Whitney Corporation, East Hartford, CT
General Electric Company, Evandale, OH

F-16 Falcon

	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement	(-)	367.9	(-)	332.9	(-)	273.7
RDT&E	(-)	124.8	(-)	70.2	(-)	124.0
Total	(-)	492.7	(-)	403.1	(-)	397.7

DoD FY 2009 Budget Request Summary Justification

F-15E Eagle



The F-15E Eagle is a twin-engine, two-man, fixed swept-wing aircraft that maintains basic F-15 air superiority characteristics while adding air-to-surface weapons capability.

Mission: The F-15E performs both air superiority and all-weather, deep penetration, night/under-the-weather attack roles with large air-to-surface weapon payloads.

FY 2009 Program: The FY 2009 budget continues development and procurement of modifications for upgrading the F-15E aircraft. The primary modifications in FY 2009 are the Antenna Test Station and Advanced Display Core Processor.

Prime Contractor: Boeing Aircraft Corporation, St. Louis, MO

F-15E Eagle						
	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement	(-)	277.0	(-)	58.7	(-)	12.3
RDT&E	(-)	134.3	(-)	114.5	(-)	184.2
Total	(-)	411.3	(-)	173.2	(-)	196.5

F-22 Raptor



The F-22 Raptor program is producing the fifth generation air-superiority fighter for the first part of this century. The F-22 penetrates enemy airspace and achieves first-look, first-kill capability against multiple targets. It has unprecedented survivability and lethality, ensuring the Joint Forces have freedom from attack, freedom to maneuver, and freedom to attack.

Mission: The F-22 enhances U.S. air superiority capability against projected threats and will eventually replace the F-15 aircraft. The F-22A is a critical component of the Global Strike Task Force, and is designed to project air dominance rapidly at great distances and to defeat threats attempting to deny access to our Nation's Joint Forces.

FY 2009 Program: Funds the final year of a three-year multi-year procurement of 60 aircraft that began in FY 2007.

Prime Contractors: Lockheed Martin Corporation, Marietta, GA and Ft. Worth, TX
Boeing Aircraft Corporation, Seattle, WA
Pratt & Whitney, East Hartford, CT

F-22 Raptor						
	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement	(20)	3,540.5	(20)	3,810.4	(20)	3,381.2
RDT&E	(-)	459.5	(-)	607.5	(-)	700.3
Total	(20)	4,000.0	(20)	4,417.9	(20)	4,081.5

DoD FY 2009 Budget Request Summary Justification

KC-X New Tanker

KC-X New Tanker will replace the aging fleet of KC-135 and KC-10 tankers.

The tanker will be a derivative of a commercial aircraft platform. It will have a larger integral cargo capacity than predecessor tankers, providing capability for secondary missions. The program is currently in source selection.



Mission: The new tanker will meet the primary air refueling missions of Global Attack, Air Bridge, Theater Support, Deployment, and Special Operations Support. Air refueling forces perform these missions at the strategic, operational, and tactical level across the entire spectrum of military operations. Other missions include emergency air refueling, airlift, aero medical evacuation, and combat search and rescue.

FY 2009 Program: The budget supports tanker development with focus on design and planning activities to support preliminary and critical design reviews, begins ground tests, and funds advance procurement for long-lead items for FY 2010.

Prime Contractor: Currently in Source Selection

KC-X New Tanker

	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement	(-)	-	(-)	-	(-)	61.7
RDT&E	(-)	68.3	(-)	113.7	(-)	831.8
Total	(-)	68.3	(-)	113.7	(-)	893.5

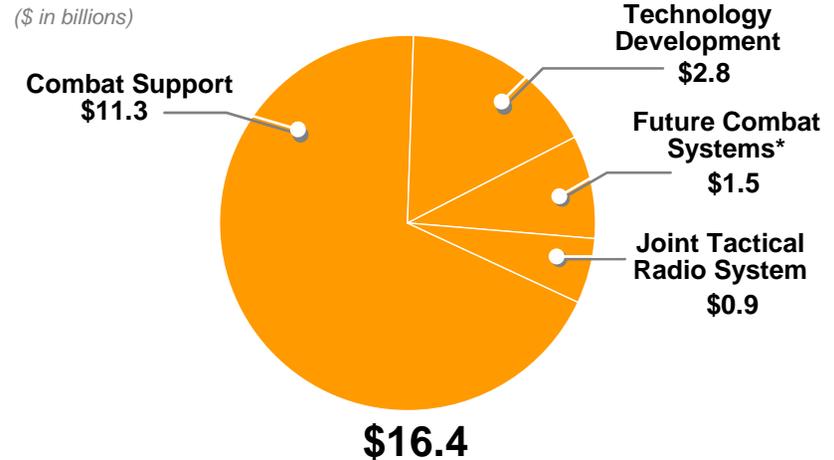
C4I SYSTEMS

Command, Control, Communications, Computers, and Intelligence (C4I) Systems

The Department is transforming and developing new concepts for the conduct of future joint military operations. The overarching goal is full spectrum dominance—defeat of any adversary or control of any situation across the full range of military operations—achieved through a broad array of capabilities enabled by an interconnected network of sensors, shooters, command, control, and intelligence. This network-based interconnectivity increases the operational effectiveness by assuring access to the best possible information by decision makers at all levels, thus allowing dispersed forces to communicate, maneuver, share a common user-defined operating picture, and successfully complete assigned missions more efficiently. Net-centricity transforms the way that information is managed to accelerate decision-making, improve joint warfighting, and create intelligence advantages. Hence, all information is visible, available, usable and trusted—when needed and where needed—to accelerate the decision cycles.

Net-centricity is a services-based architecture pattern for information sharing. It is being implemented by the Command, Control, Communications, Computer, and Intelligence (C4I) community via building joint architectures and roadmaps for integrating joint airborne networking capabilities with the evolving ground, maritime and space networks. It encompasses the development of technologies like gateways, waveforms, network management and information assurance. This growth is supported in the FY 2009 President’s budget with programs like the Future Combat Systems, Warfighter Information Network-Tactical (WIN-T), Joint Tactical Radio Systems, Net-Centric

FY 2009 Command, Control, Communications, Computers, and Intelligence (C4I) Systems



Source: FY 2009 PRCP – Investment Categorization

106-WP

Numbers may not add due to rounding

*Funding for Future Combat Systems includes an additional \$2.0B to finance Ground Vehicles—see Ground Vehicles section for more information

Enterprise Services (NCES), and Net-Enabled Command and Control (NECC).

The Future Combat Systems (FCS) program provides for the development of an integrated platform of systems and weapons, fully inter-connected in a network giving the warfighter total battlespace awareness. Additional funding for the FCS program provides for the development of ground systems including vehicles, sensors, and related combat equipment.

DoD FY 2009 Budget Request Summary Justification

Joint Tactical Radio System DOD - JOINT

The Joint Tactical Radio System (JTRS) is a DoD-wide effort lead by the Navy to develop, produce, integrate, test, and field a family of interoperable, digital, affordable, multi-channel, software-reprogrammable radios at moderate risk. JTRS will provide secure, wireless networking communications capabilities for mobile and fixed site uses. Ground, airborne, vehicular, maritime, and small form factors variants of the radio hardware and 36 waveforms for importing into the JTRS hardware fall under this program. All JTRS products are being developed in a joint environment, boosting hardware and software commonality and reusability.



Mission: JTRS products will simultaneously receive, transmit and relay voice, data, and video communications with software re-programmable, net-workable, multi-band, and multi-mode system.

FY09 Program: The budget funds design, development, and manufacture of JTRS engineering development models (EDMs), to include hardware and software.

Prime Contractors: Boeing Aircraft Corporation, Seattle, WA
 Lockheed Martin Corporation, Marietta, GA
 ViaSat Incorporated, San Diego, CA
 General Dynamics Decision Sys, Scottsdale, AZ

Joint Tactical Radio System						
	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
O&M	(-)	14.2	(-)	19.3	(-)	18.3
RDT&E	(-)	774.0	(-)	835.4	(-)	834.7
Total	(-)	788.2	(-)	854.7	(-)	853.0

Future Combat Systems USA

The Future Combat Systems (FCS) is the Army's principal modernization program. It is a complex acquisition program that involves developing and integrating a family of 14 manned and unmanned ground vehicles, air vehicles, sensors and munitions that are linked by an information network. FCS modernizes the Army's ability to move, shoot and communicate on the battlefield. It is the material solution for the Army's future force. Through FY 2007, the FCS program is about a third of the way and \$11.4 billion through development. It plans to achieve initial operational capability in FY 2015 and full operational capability in FY 2017.



Mission: FCS is designed to transform the Army into a more rapidly deployable and responsive force, moving away from the large division-centric structure.

FY09 Program: The FY 2009 budget funds continued development of eight manned ground vehicles, two unmanned ground vehicles, two unmanned aerial vehicles (UAVs), non-line-of-sight launch system, unattended ground sensors, and an information network.

Prime Contractors: Boeing Aircraft Corporation, Seattle, WA
 Science Applications International Corporation (SAIC) La Jolla, CA

Future Combat Systems						
	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement	(-)	(-)	(-)	100.9	(-)	331.2
RDT&E	(-)	3,378.1	(-)	3,336.0	(-)	3,226.5
Total	(-)	3,378.1	(-)	3,436.9	(-)	3,557.7

DoD FY 2009 Budget Request Summary Justification

Single Channel Ground & Airborne Radio

The Single Channel Ground and Airborne Radio System (SINCGARS) is a flexible and secure combat radio. Originally providing a voice-only capability, it has evolved into a software-defined, open architecture system with networking capabilities. SINCGARS includes a frequency-hopping and jam resistant feature that can defeat sophisticated threat jamming techniques on the digitized battlefield. The SINCGARS continues its evolutionary development with the fielding of the Advanced SINCGARS System Improvement Program (ASIP) radio. The SINCGARS ASIP radio provides enhanced data and voice communications while using commercial Internet Protocols. The family of SINCGARS radios is employed on such system platforms as the Bradley M2A3, Patriot, Abrams MIA2SEP, and Longbow Apache helicopter.



Mission: SINCGARS provides clear, secure voice and data communications enabling situational awareness and transmits Command and Control (C2) information across the entire battlefield

FY 2009 Program: The FY 2009 budget procures SINCGARS radios providing command and control for the combat/combat support/combat service support units.

Prime Contractors:

ITT Fort Wayne, IN, Gaithersburg, MD
General Dynamics Land Systems Corp, Tallahassee, FL

Single Channel Ground & Airborne Radio

	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement	(57,510)	630.6	(6,642)	148.6	(5,300)	84.9
Total	(57,510)	630.6	(6,642)	148.6	(5,300)	84.9

Warfighter Information Network- Tactical

The Warfighter Information Network-Tactical (WIN-T) is the Army's tactical communications network for secure and seamless video, data, imagery, and voice services in the theater. The new WIN-T strategy: 1) integrates the Joint Network Node (JNN) program into a single network program comprised of four severable increments; 2) provides "full networking on-the-move capability" via satellite communications and aerial tier; and 3) supports Future Combat Systems development. WIN-T is budgeted to the Cost Analysis Improvement Group (CAIG) estimate.



Mission: The WIN-T program designs, develops and fields the Future Modular Force transport network while leveraging mature technologies that can enhance the Current Modular Force to operate in an emerging noncontiguous environment.

FY09 Program: The FY 2009 budget funds the continued System Development and Demonstration (SDD) efforts for Increments 1 and 2, Limited User Test, engineering builds, and manufacture of prototypes.

Prime Contractors:

Lockheed Martin Mission Systems, Gaithersburg, MD
General Dynamics Government Systems Corp, Taunton, MA

Warfighter Information Network- Tactical

	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement	(-)	-	(-)	-	(-)	287.6
RDT&E	(-)	119.3	(-)	320.1	(-)	414.4
Total	(-)	119.3	(-)	320.1	(-)	702.0

GROUND VEHICLES

DoD FY 2009 Budget Request Summary Justification

Ground Vehicles

The Department continues to modernize the Army and Marine Corps' Combat and Tactical Wheeled Vehicle fleets. Both Services plan to modernize their fleets by replacing older vehicles and combat losses with new procurement or upgrading existing vehicles through recapitalization. Their plans call for improvements in the capabilities of vehicles by inserting advanced technologies into the current vehicles as quickly as possible.

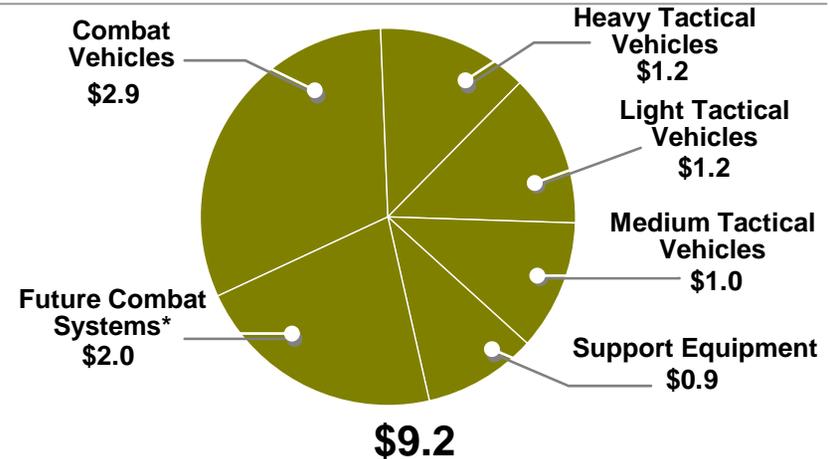
During the last several years, ground-based conflicts such as OIF and OEF have increased the demand for ground vehicles. Ground vehicle funding has seen an average annual compounded growth of 45 percent from 2002 to 2008. This funding growth is due, in large measure, to the procurement of Mine Resistant Ambush Protected (MRAP) vehicles to support forces in Iraq. MRAPs have been entirely funded through GWOT funds and are included in this section's FY 2007 and 2008 appropriation numbers, but not in FY 2009. The MRAP is a heavily armored vehicle capable of mitigating the effects of underbody mines and small arms fire threats. It provides survivable, safe, and sustainable vehicles to troops in theater.

Ongoing operations also resulted in acquisition of tactical vehicles:

- Light Tactical Vehicles such as the High Mobility Multipurpose Wheeled Vehicle (HMMWV) comprise about half of the tactical wheeled vehicle fleet for the Army. The Joint Lightweight Tactical Vehicle (JLTV) is a joint Army and Marine Corps program currently in development and is intended to replace the HMMWV;
- Medium Tactical Vehicles provide a significant portion of the supply and ammunition delivery to the combat vehicle fleet;
- Heavy Tactical Vehicles consist of cargo and missile carriers, load-handling systems, fuel tankers, wreckers and materiel-handling cranes;

FY 2009 Ground Vehicles

(\$ in billions)



Source: FY 2009 PRCP – Investment Categorization

106-WP

Numbers may not add due to rounding

*Funding for Future Combat Systems includes an additional \$1.5B to finance C4I Systems—see the C4I Systems section for more information

- Integration of new technologies across various types of combat vehicles increases firepower, lethality, mobility, and survivability;
- The Abrams tank upgrades include armor protection, a nuclear, biological, and chemical protection system, improved power, and a second-generation thermal sensor;
- The Stryker family of armored vehicles is the centerpiece for the Stryker Brigade Combat Teams and provides the Army with a mobile weapon system that operates with speed and can maneuver in combat terrain and urban areas; and
- The Expeditionary Fighting Vehicle (EFV) is currently in development and is the keystone for the Marine Corps Expeditionary Maneuver Warfare fighting concepts. It will provide the Marine Corps a primary means of tactical mobility during the conduct of amphibious/ground combat operations.

DoD FY 2009 Budget Request Summary Justification

Joint Light Tactical Vehicle **DOD - JOINT**

The Joint Light Tactical Vehicle (JLTV) is currently in technology development by the Army and Marine Corps. The JLTV concept is based on a family of vehicles focused on scalable armor protection, vehicle agility, and mobility required for the light tactical vehicle fleet. There are three JTLV categories based on payload: 3,500 lbs, providing general purpose mobility (four seat); 4,500 lbs, providing mobility as an infantry carrier and fire team; and 5,100 lbs, the shelter carrier, utility vehicle, and ambulance (four seat). The JLTV is intended to replace the HMMWV.



Mission: The JLTV mission is to provide defensive measures to protect troops while in transport, increase payload capability, and achieve commonality of parts and components to reduce the overall life cycle cost of the vehicle.

FY 2009 Program: The FY 2009 program continues the program in technology development at acquisition lifecycle Milestone A.

Joint Light Tactical Vehicle						
	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
RDT&E						
Army	(-)	24.3	(-)	37.2	(-)	22.2
Navy	(-)	5.0	(-)	41.7	(-)	44.0
Total	(-)	29.3	(-)	78.9	(-)	66.2

Mine Resistant Ambush Protected **DOD - JOINT**

The MRAP vehicle family is a joint acquisition program that provides the Nation's operating forces with vehicles that are capable of defeating or mitigating the effects of



Improvised Explosive Devices (IEDs) and rocket propelled grenades, while conducting multiple missions in the highest threat areas. A raised chassis, heavy armor, and V-shaped hull deflect from underneath the blast effect created by mines or IED explosions providing passengers with effective and reliable protection. The MRAP is also designed to mitigate explosive hazards by identifying and clearing mines by neutralizing the effects of explosive devices. MRAP II, the next series, adds explosively formed projectile armor protection.

Mission: The MRAP vehicle fleet has multiple missions to include reconnaissance, convoy operations, troop transport, ambulance, combat engineer and explosive ordnance disposal missions for maneuver units.

FY 2009 Program: There is no procurement or development funding requested in FY 2009. The 15,374 MRAP acquisition objective will be achieved in FY 2008.

Prime Contractors: Various

Mine Resistant Ambush Protected Vehicles						
	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement	(6,480)	5,217.0	(7,394)	13,404.0	(-)	-
RDT&E	(-)	183.0	(100)	60.0	(-)	-
Total	(6,480)	5,400.0	(7,494)	13,464.0	(-)	-

DoD FY 2009 Budget Request Summary Justification

Armored Security Vehicle

The M1117 Armored Security Vehicle (ASV) is a lightly armored, all-wheel-drive vehicle with 360 degree armor protection against armor piercing, high explosive fragmentation, and anti-tank mines under the wheels and under the hull. The ASV has a crew of three plus one passenger. It has a full collective NBC protection system and a digitized package which includes Blue Force Tracker and SINCGARS radio. The ASV provides protection to the crew compartment, gunner's station, and the ammunition storage area. The turret is fully enclosed with both an MK-19 40mm grenade machine gun, .50 caliber machine gun, and a smoke grenade launcher. It also provides ballistic, blast, and overhead protection for its crew. The ASV has a payload of 3,360 pounds and supports Army transformation with its 400+ mile range, top speed of nearly 70 miles per hour, and C-130 deployability.

Mission: The ASV is a turreted, armored, all-wheel drive vehicle that supports military police missions, such as rear area security, law and order operations, protects convoys in hostile areas, battlefield circulation, and enemy prisoner of war operations, over the entire spectrum of war and operations other than war.

FY 2009 Program: The budget procures and fields 204 Armored Security Vehicles.

Prime Contractor: Textron Marine & Land Systems, New Orleans, LA



Family of Heavy Tactical Vehicles

The Family of Heavy Tactical Vehicles (FHTV) consists of the Palletized Load System (PLS) and the Heavy Expanded Mobility Tactical Truck (HEMTT).

The PLS consists of a 16.5-ton tactical vehicle composed of a 10x10 truck with integral self load/unload capability, 16.5-ton companion trailer, and demountable cargo beds (flatracks). The Forward Repair System (FRS) is issued to Maintenance units along with the PLS as its prime mover. The HEMTT is a 10-ton vehicle (8x8) which comes in five configurations (M977-Cargo w/Crane, M978-2500 gallon Fuel Tanker, M983-Tractor, M9841A1-Wrecker, M985-Cargo w/Heavy Crane, and M1120-Load Handling System (LHS)). The HEMTT version A4 enters production in June 2008 and has a common cab with PLS and features a modern power train, air ride suspension, updated electrical system, ABS & traction control, climate control and B-Kit armor capable.

Mission: The FHTV is used in line haul, local haul, unit resupply, and other missions to support modern and highly mobile combat units.

FY 2009 Program: The FY 2009 program procures 1,061 FHTV vehicles

Prime Contractor: Oshkosh Truck Corporation, Oshkosh, WI



Armored Security Vehicle						
	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement	(555)	461.9	(274)	283.8	(204)	195.4
Total	(555)	461.9	(274)	283.8	(204)	195.4

Family of Heavy Tactical Vehicles						
	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement	(3,185)	1,569.6	(1,371)	986.9	(1,061)	923.3
RDT&E	(-)	13.0	(-)	12.7	(-)	2.9
Total	(3,185)	1,582.6	(1,371)	999.6	(1,061)	926.2

DoD FY 2009 Budget Request Summary Justification

Family of Medium Tactical Vehicles

The FMTV is a family of diesel powered trucks in the 2 1/2 ton (4x4) and 5 ton (6x6) payload classes. This Non-Developmental Item (NDI) program capitalizes on current state of the art automotive technology including a diesel engine, automatic transmission, and central tire inflation system (CTIS). Sub-variants have air drop capability for contingency, rapid deployment capability and is strategically deployable in C-5, C-17, and C-130 aircraft. The FMTV is built around a common chassis and drive train, featuring over 80 percent commonality of parts and components between models and weight classes that will improve unit operational capabilities and reduce Operation and Support costs .



Mission: The FMTV's numerous models perform a wide variety of missions including cargo transport (cargo model), vehicle recovery operations (wrecker), construction (dump), line haul (tractor), and airdrop missions (Low Velocity Air Drop (LVAD) model), and civil disaster relief.

FY09 Program: The Army's FY 2009 program will procure 3,187 trucks.

Prime Contractor: Stewart and Stevenson, Sealy, TX

Family of Medium Tactical Vehicles

	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement	(11,460)	3,090.0	(2,992)	1,986.2	(3,187)	944.7
RDT&E	(-)	12.5	(-)	6.4	(-)	2.0
Total	(11,460)	3,102.5	(2,992)	1,992.6	(3,187)	946.7

M-1 Abrams Tank Upgrade

The Abrams tank modernization strategy comprises two variants, the M1A1 and M1A2. The current production configurations of these are the M1A1 Situational Awareness (SA) and M1A2 System Enhancement Program version 2 (SEPV2). The M1A1 SA modernization program includes increased armor protection, a nuclear, biological, and chemical protection system, an improved AGT1500 turbine engine, and a second-generation thermal sensor. The M1A2 SEPV2 modernization program includes a commander's independent thermal viewer, position navigation equipment, improved fire control system, second-generation thermal sensors, a thermal management system, an improved AGT1500 turbine engine and six improved digital Line Replaceable Units (LRUs).



Mission: Provides mobile, protected firepower for battlefield superiority against heavy armor forces.

FY 2009 Program: The FY 2009 budget procures and fields M1A2 SEPV2 tanks to armor units including the 1st Armored Division and 3rd Armored Cavalry Regiment.

Prime Contractor: General Dynamics Land Systems
Sterling Heights, MI

M-1 Abrams Tank Upgrade

	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement	(338)	2,578.5	(20)	1,010.0	(29)	692.7
RDT&E	(-)	12.1	(-)	35.6	(-)	35.0
Total	(338)	2,590.6	(20)	1,045.6	(29)	727.7

DoD FY 2009 Budget Request Summary Justification

Stryker Family of Armored Vehicles

Stryker is a four-wheel drive, selective eight-wheel drive, armored vehicle weighing approximately 19 tons. It can reach speeds of 62 mph on the highway and has a maximum range of 312 miles.



It is deployable by air and combat capable upon arrival. There are 10 Stryker configurations which include the Infantry Carrier Vehicle (ICV); Mobile Gun System (MGS); Reconnaissance Vehicle (RV); Anti-Tank Guided Missile (ATGM); Nuclear, Biological, Chemical, and Radiological Vehicle (NBCRV); Medical Evacuation Vehicle (MEV) Commander's Vehicle (CV); Fire Support Vehicle (FSV); Mortar Carrier (MC); and Engineer Squad Vehicle (ESV).

Mission: The Stryker provides the Army with a mobile weapon system that operates with speed and can maneuver in combat terrain and urban areas. It combines high mobility, firepower, and versatility with common parts and components.

FY 2009 Program: FY 2009 continues to procure vehicles for the Stryker Brigade Combat Teams.

Prime Contractor: General Dynamics Land Systems, Shelby Township, MI

Stryker Family of Armored Vehicles						
	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement	(245)	1,430.6	(92)	959.7	(119)	1,175.0
RDT&E	(-)	8.4	(-)	143.7	(-)	108.0
Total	(245)	1,439.0	(92)	1,103.4	(119)	1,283.0

High Mobility Multipurpose Wheeled Vehicle

The High Mobility Multipurpose Wheeled Vehicle (HMMWV) is a light, highly mobile, diesel-powered, air-transportable and air-droppable, four-wheel-drive tactical vehicle.



The HMMWV can be configured, through the use of common components and kits, to become a cargo/troop carrier, armament carrier, shelter carrier, ambulance, and TOW and Stinger weapons carrier. The Army and Marine Corps have enhanced the HMMWV with add-on armor kits that can be installed or removed to meet mission requirements. These protection (B-kits) add armor to areas such as the doors, rocker panel, and front wheel wells.

Mission: The HMMWV fulfills specific missions by serving as the platform for several weapon systems. The M1151 Enhanced Armament Carrier and M1152 Enhanced Shelter Carrier have a heavier chassis and improved engine that enables the use of removable add-on armor protection providing the Army greater flexibility when deploying units.

FY 2009 Program: The FY2009 program procures 5,249 HMMWV's with integrated armor and safety initiatives.

Prime Contractor: AM General, Mishawaka, IN

High Mobility Multipurpose Wheeled Vehicle						
	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement						
Army	(13,578)	2,550.4	(7,600)	1,397.1	(4,977)	947.0
Other Services	(4,641)	687.1	(1,400)	197.0	(272)	42.7
Total	(18,219)	3,237.5	(9,000)	1,594.1	(5,249)	989.7

DoD FY 2009 Budget Request Summary Justification

Expeditionary Fighting Vehicle



The Expeditionary Fighting Vehicle (EFV) is an armored, fully tracked infantry combat vehicle that is a keystone for the Marine Corps Expeditionary



Maneuver Warfare and Ship-to-Objective Maneuver warfighting concepts. It will be the Marine Corps' primary means of tactical mobility for the Marine Rifle Squad during amphibious operations and subsequent ground combat operations ashore. The EFV provides increased operational tempo, survivability and lethality throughout the battlespace and across the spectrum of conflict. The EFV will replace the current Amphibious Assault Vehicle (AAV) which was originally fielded in 1972.

Mission: The EFV is a self-deploying, high-water-speed, armored amphibious vehicle that provides high speed transport of embarked Marine infantry from ships located beyond the horizon. Although not a main battle tank, the EFV will have the speed and maneuvering capabilities to conduct operations with battle tanks on land and provide land mobility and direct fire support during combat operations.

FY 2009 Program: The FY 2009 program continues system development.

Prime Contractor: General Dynamics Corp., Woodbridge, VA

Expeditionary Fighting Vehicle						
	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
RDT&E	(-)	314.9	(-)	247.2	(-)	316.1
Total	(-)	314.9	(-)	247.2	(-)	316.1

MISSILE DEFENSE

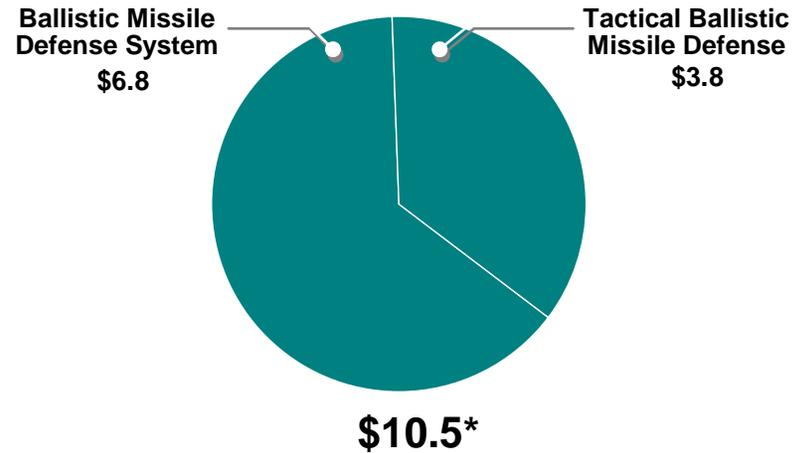
Missile Defense

The goal of the Nation's missile defense investment is to develop and progressively field a system to defend the U.S., its deployed forces, and its Allies and friends against ballistic missiles. This category includes all missile defense systems designed to defeat hostile ballistic missiles of various ranges and phases of flight.

Components include interceptor missiles themselves as well as the associated sensors and command, control, battle management, and communications systems. There are also significant investments in construction, targets and counter-measures, and research, development, test, and evaluation activities. Included in this category are all programs that are either critical to the functionality of missile defense or support missile defense as a primary mission. Representative programs are the Airborne Laser (ABL) program (aircraft-based), AEGIS (ship-based), Terminal High Altitude Area Defense (THAAD) (ground-based), Ground-Based Midcourse Defense (GMD) (ground-based), and Patriot Advance Capability – 3 (PAC-3) (ground based).

FY 2009 Missile Defense

(\$ in billions)



Source: FY 2009 PRCP – Investment Categorization

106-WP

Numbers may not add due to rounding

*Does not include the \$0.4B of Military Construction and BRAC funding included in the Missile Defense program write-up that follows (p. 190)

DoD FY 2009 Budget Request Summary Justification

Patriot / MEADS

DOD - JOINT

The Patriot/Medium Extended Air Defense System (MEADS) Combined Aggregate Program (CAP) is a cooperative program with Germany and Italy to develop a ground-based air and terminal ballistic missile defense capability. The Patriot/MEADS CAP will be a highly mobile, tactically deployable system to protect the maneuver force from short-range and medium-range ballistic missiles, cruise missiles, and other air-breathing threats. It will have the capability to provide point defense of critical assets in addition to providing continuous protection of a rapidly advancing maneuver force.

Mission: To protect critical assets and maneuver forces that belong to the Corps and Echelons Above Corps from cruise missiles, tactical ballistic missiles, fixed and rotary wing aircraft, and unmanned aerial vehicles.

FY 2009 Program: The budget request supports the continuous system design and development program and the initial production facilitization required to build the Missile Segment Enhancement missile.

Prime Contractor: MEADS International, Orlando, FI

Patriot / Medium Extended Air Defense System CAP

	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement	(-)	-	(-)	-	(-)	31.0
RDT&E	(-)	322.9	(-)	370.0	(-)	431.3
Total	(-)	322.9	(-)	370.0	(-)	462.3

Patriot / PAC-3

DOD - JOINT

Patriot is a ground-based air and terminal ballistic missile defense system, using guided missiles to engage and destroy multiple targets at varying ranges. The Patriot Advanced Capability-3 (PAC-3) is the latest evolution of the Patriot ground-based air and terminal ballistic missile defense system.

The full capability provides defense against short-range and medium-range ballistic missiles, cruise missiles, unmanned aerial vehicles and other air-breathing threats as part of the Ballistic Missile Defense System. PAC-3 missiles continue to be produced and fielded and have been used in support of Operation Iraqi Freedom.

Mission: To protect critical assets and maneuver forces that belong to the Corps and Echelons Above Corps from cruise missiles, tactical ballistic missiles, fixed and rotary wing aircraft, and unmanned aerial vehicles.

FY 2009 Program: The budget request supports modernization of ground support equipment, development of Patriot product improvements and evolutionary development and fielding the PAC-3 missile.

Prime Contractor PAC-3 Missile: Lockheed Martin, Dallas, TX

Patriot Advanced Capability-3

	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement	(112)	494.6	(108)	469.7	(108)	512.1
RDT&E	(-)	16.5	(-)	10.8	(-)	11.2
Total	(112)	511.1	(108)	480.5	(108)	523.3



DoD FY 2009 Budget Request Summary Justification

Missile Defense

DOD - JOINT

Missile Defense is a multi-layer, multifaceted program designed to protect the U.S., its Allies, and deployed forces from missile attack. The program is managed as one system that will explore concepts and eventually develop and field air, sea, ground, and space systems that will intercept any range of threat in the boost, midcourse or terminal phases of flight trajectory. Major systems include Ground Based Midcourse, AEGIS Ballistic Missile Defense (BMD), Airborne Laser, Terminal High Altitude Area Defense (THAAD), and Space Tracking and Surveillance System.



Mission: To conduct research and development of defensive technologies and related systems that may enable the destruction of ballistic missiles and warheads in flight and to develop and field systems that protect the U.S. as well as allied forces from a missile attack.

FY 2009 Program: The budget request supports sustainment of the initial capabilities deployed, along with closing gaps and improving capabilities through production and fielding of ground-based interceptors; development of mobile ground-based interceptors; continued production and fielding of forward based radars; and production and delivery of the mobile sea-based interceptors. This includes leveraging technological development options to dissuade and staying ahead of current and emerging threats. The requested funds for the surface-launched AMRAAM system will procure long-lead nonrecurring engineering for the FY 2010 launcher buy.

Prime Contractors: Boeing, Lockheed Martin
Northrop Grumman, Raytheon

Planned BMDs Interceptor Inventory (Cumulative Totals)

	FY 2007	FY 2008	FY 2009
Ground Based Interceptor	24	27	30
Standard Missile -3	20	37	52
THAAD	–	–	7
Total	44	64	89

Missile Defense Agency

	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
RDT&E, DW	(–)	183.8	(–)	108.4	(–)	118.7
BMD Technologies	(–)	347.4	(–)	196.9	(–)	288.3
Advanced Concepts/ Special Programs	(–)	1,082.5	(–)	1,045.3	(–)	1,019.1
BMD Terminal Defense	(–)	2,985.1	(–)	2,243.2	(–)	2,076.7
BMD Midcourse Defense	(–)	1,125.4	(–)	1,126.3	(–)	1,157.8
AEGIS BMD	(–)	622.2	(–)	510.2	(–)	421.2
BMD Boost Defense	(–)	515.0	(–)	586.1	(–)	1,077.0
BMD Sensors	(–)	311.4	(–)	231.5	(–)	242.4
Space Tracking and Surveillance	(–)	341.4	(–)	340.1	(–)	386.8
BMD System Interceptors	(–)	133.6	(–)	229.9	(–)	354.5
Multiple Kill Vehicle	(–)	1,733.4	(–)	1,934.0	(–)	1,748.3
Other Programs	(–)	9,381.3	(–)	8,552.1	(–)	8,890.7
Subtotal	(–)	9,381.3	(–)	8,552.1	(–)	8,890.7
MILCON, MDA	(–)	–	(–)	–	(–)	285.0
BRAC, MDA	(–)	–	(–)	103.2	(–)	160.0
Surface Launched AMRAAM System Procurement, Army	(–)	–	(–)	–	(–)	40.5
JTAMDO (Joint Staff) RDT&E, DW	(–)	52.3	(–)	53.7	(–)	55.3
Total	(–)	9,433.6	(–)	8,709.0	(–)	9,431.5

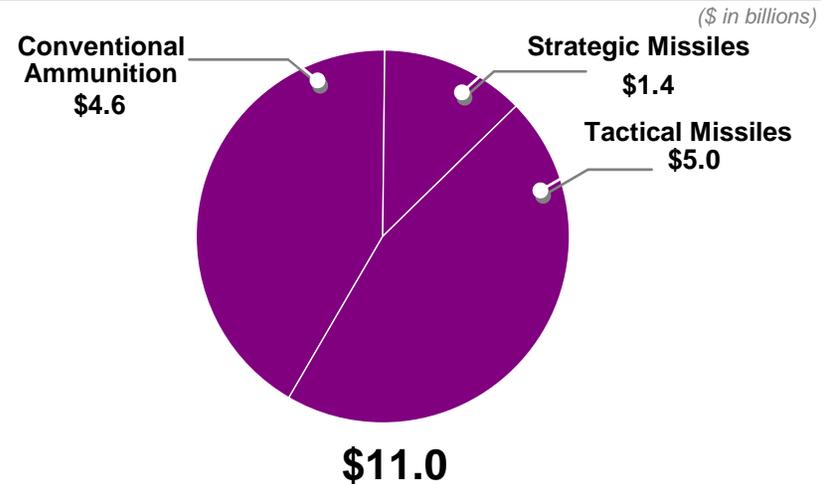
MUNITIONS AND MISSILES

Munitions and Missiles

Munitions is a general term for ammunition and missiles including conventional ammunition, bombs, missiles, warheads, and mines. This category includes conventional and nuclear weapons and weapons used for both tactical and strategic purposes. Many of the missiles and munitions are precision guided with the technical sophistication to allow guidance corrections during flight-to-target. Some programs include non-explosive articles that enhance the performance of other munitions. For example, the Joint Direct Attack Munition (JDAM) adds guidance capability to an attached gravity bomb, making it a “smart” bomb. Interceptor missiles supporting the missile defense mission are included in the Missile Defense section.

Funding has decreased moderately over the last several years as inventories of direct attack weapons such as JDAM have become plentiful. The Department continues to build inventories of standoff weaponry, such as the Joint Air to Surface Standoff Missile, the Joint Standoff Weapon, and the Small Diameter Bomb.

FY 2009 Munitions and Missiles



Source: FY 2009 PRCP – Investment Categorization
Numbers may not add due to rounding

106-WP

DoD FY 2009 Budget Request Summary Justification

Advanced Med. Range Air-to-Air Missile **DOD - JOINT**



The Advanced Medium Range Air-to-Air Missile (AMRAAM) is an all-weather, all-environment radar-guided missile developed to improve capabilities against very low-altitude and high-altitude, high-speed targets in an electronic countermeasures environment. AMRAAM is a joint Navy/Air Force program led by the Air Force.

Mission: The mission of the AMRAAM is to destroy low-and-high-altitude, high-speed enemy targets in an electronic countermeasures environment.

FY 2009 Program: The FY 2009 program continues full rate production as well as product improvements.

Prime Contractor: Raytheon Company, Tucson, AZ

Advanced Medium Range Air-to-Air Missile

	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement						
Air Force	(59)	114.2	(148)	193.3	(281)	294.7
Navy	(42)	88.3	(78)	86.9	(147)	146.8
Subtotal	(101)	202.5	(226)	280.2	(428)	441.5
RDT&E						
Air Force	(-)	33.4	(-)	33.4	(-)	54.2
Navy	(-)	6.1	(-)	2.5	(-)	8.6
Subtotal	(-)	39.5	(-)	35.9	(-)	62.8
Total	(101)	242.0	(226)	316.1	(428)	504.3

Air Intercept Missile – 9X **DOD - JOINT**



The AIM-9X short range air-to-air missile provides a launch and leave, air combat missile that uses passive infrared energy for acquisition and tracking of enemy aircraft. AIM-9X is a joint Navy/Air Force program led by the Navy.

Mission: The mission of the AIM-9X is to destroy low and high altitude, high-speed enemy targets in an electronic countermeasures environment.

FY 2009 Program: The FY 2009 program continues full rate production and product improvements.

Prime Contractor: Raytheon Company, Tucson, AZ

AIM-9X

	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement						
Air Force	(183)	43.7	(149)	52.3	(275)	77.2
Navy	(174)	40.2	(170)	54.5	(205)	57.5
Subtotal	(357)	83.9	(319)	106.8	(480)	134.7
RDT&E						
Air Force	(-)	8.6	(-)	7.9	(-)	5.7
Navy	(-)	7.8	(-)	4.4	(-)	6.7
Subtotal	(-)	16.4	(-)	12.3	(-)	12.4
Total	(357)	100.3	(319)	119.1	(480)	147.1

DoD FY 2009 Budget Request Summary Justification

Chemical Demilitarization

DOD - JOINT

The Chemical Demilitarization Program is composed of three major defense acquisition programs with the goal of destroying a variety of chemical agents and weapons, as well as the destruction of former chemical weapon production facilities. It is designed to eliminate the existing chemical weapons stockpile in compliance with the Chemical Weapons Convention (CWC), while ensuring the safety and security of the workers, the public, and the environment.



Mission: There are five mission areas within this Program: 1) destroy chemical agents and weapons stockpile using incineration technology; 2) destroy bulk container chemical agent stockpiles using neutralization technology; 3) destroy chemical agents and weapons stockpiles using neutralization technologies; 4) destroy Chemical Warfare Materiel (CWM) apart from the stockpile including: disposal of binary chemical weapons, former production facilities, various CWM and recouped chemical weapons, and remediation support work; and 5) chemical stockpile emergency preparedness.

FY 2009 Program: The budget reflects continued safe and secure destruction of chemical agents and weapons at existing destruction operating facilities, with continued construction efforts at the two pilot facilities located in Pueblo, CO and Blue Grass, KY. Both these sites will use an alternative destruction technology (chemical agent neutralization) for incineration.

Prime Contractors:

- Edgerton, Germeshausen and Grier (EG&G) Defense Materials, Tooele, Utah
- Westinghouse (Washington Group Engineering Services), Anniston, Alabama
- Washington Demilitarization Company, Umatilla, Oregon
- Washington Demilitarization Company, Pine Bluff, Arkansas
- Bechtel National Incorporated, Edgewood, Maryland
- Parsons Infrastructure & Technical Group, Newport, Indiana
- Bechtel National Incorporated, Pueblo, Colorado
- Bechtel Parsons, Richmond, Kentucky

Chemical Demilitarization Program						
	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
CAMD	(-)	1,272.0	(-)	1,513.0	(-)	1,486.0
MILCON	(-)	131.0	(-)	104.0	(-)	134.0
Total	(-)	1,403.0	(-)	1,617.0	(-)	1,620.0

DoD FY 2009 Budget Request Summary Justification

Joint Air-to-Ground Missile *DOD - JOINT*

The Joint Air-to-Ground Missile (JAGM) is a joint Army and Navy program led by the Army to provide a conventional, precision-guided, air-to-ground weapon that can be delivered from both fixed and rotary wing aircraft. The JAGM is intended to replace the aging inventory of Hellfire and Maverick missiles. The concept of the JAGM is to employ a multi-mode seeker to attack fixed and moving targets alike.

Mission: The mission of the JAGM is to provide close air support with ability to attack fixed and moving targets. Although a different program, JAGM is meant to fill the same capability as the earlier terminated Joint Common Missile.

FY 2009 Program: The FY 2009 program continues development.

Prime Contractors: Currently in Source Selection

Joint Air-to-Ground Missile						
	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
RDT&E						
Army	(-)	-	(-)	53.2	(-)	118.5
Navy	(-)	-	(-)	14.7	(-)	62.3
Total	(-)	-	(-)	67.9	(-)	180.8

Joint Air to Surface Standoff Missile *DOD - JOINT*



The Joint Air-to-Surface Standoff Missile (JASSM) is a conventional precision-guided, long-range standoff cruise missile that can be delivered from both fighters and bombers. The Navy terminated its involvement in JASSM in FY 2006 in favor of other weapons.

Mission: The mission of the JASSM is to destroy targets from outside the ranges of the enemy's air defenses.

FY 2009 Program: The FY 2009 program procures JASSMs subject to successful reliability testing and Nunn-McCurdy certification.

Prime Contractor: Lockheed Martin Integrated Systems Incorporated, Orlando, FL

Joint Air to Surface Standoff Missile						
	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement						
Air Force	(163)	156.5	(115)	160.0	(260)	240.3
RDT&E						
Air Force	(-)	33.0	(-)	12.1	(-)	13.0
Total	(163)	189.5	(115)	172.1	(260)	253.3

DoD FY 2009 Budget Request Summary Justification

Joint Direct Attack Munition *DOD - JOINT*



The Joint Direct Attack Munition (JDAM) is a joint Air Force/Navy program led by the Air Force. The JDAM improves the existing inventory of general purpose gravity bombs by integrating a Global Positioning System/inertial navigation guidance capability that improves accuracy and adverse weather capability.

Mission: The mission of the JDAM is to enhance DoD conventional strike system capabilities by providing the ability to precisely attack time-critical, high value fixed, relocatable, or maritime targets under adverse environmental conditions and from all altitudes.

FY 2009 Program: The FY 2009 program continues production, but at reduced rates from prior years, given the relatively healthy inventory of JDAM.

Prime Contractor: Boeing Aircraft Corporation, St. Charles, MO

Joint Direct Attack Munition						
	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement						
Air Force	(7,261)	194.1	(3,817)	112.0	(3,647)	105.7
Navy	(3,324)	86.6	(1,357)	38.4	(169)	9.3
Subtotal	(10,585)	280.7	(5,174)	150.4	(3,816)	115.0
RDT&E						
Air Force	(-)	21.0	(-)	-	(-)	-
Total	(10,585)	301.7	(5,174)	150.4	(3,816)	115.0

Joint Standoff Weapon *DOD - JOINT*



The Joint Standoff Weapon (JSOW - AGM-154) is a joint weapon providing day, night, and adverse weather environment munition capability. The JSOW consists of three variants. The JSOW baseline (BLU-97 Submunition) provides a day, night, and all-weather environment submunition for soft and area targets. The JSOW Unitary incorporates the multi-stage Broach penetrating warhead with terminal accuracy via Automatic Target Acquisition Seeker Technology. Lastly, the BLU-108 variant provides an anti-armor/tank capability. Continued production of the BLU-108 JSOW has been deferred. The Air Force terminated production of JSOW in FY 2005, favoring other weapons to meet the requirement.

Mission: The mission of the JSOW is to provide a primary standoff precision guided munition capability. The day/night, adverse weather capability provides continuous munitions operations from a survivable standoff range.

FY 2009 Program: The FY 2009 program continues production and product improvements of JSOW Unitary for the Navy only.

Prime Contractor: Raytheon Corporation, Tucson, AZ

Joint Standoff Weapon						
	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement	(388)	124.1	(416)	130.4	(496)	149.1
RDT&E	(-)	26.8	(-)	29.1	(-)	22.5
Total	(388)	150.9	(416)	159.5	(496)	171.6

DoD FY 2009 Budget Request Summary Justification

Small Diameter Bomb



The Small Diameter Bomb (SDB) is a joint Air Force and Navy program led by the Air Force to provide a conventional small sized, precision guided, standoff air-to-ground weapon that can be delivered from both fighters and bombers.

Mission: The mission of the SDB is to destroy targets from a medium-range standoff position deliverable by both fighters and bombers, with higher load-out and less collateral damage compared to other weapons.

FY 2009 Program: The FY 2009 program continues production of SDB Increment I, for fixed target attack, and continues development of Increment II, for moving target attack.

Prime Contractor: Boeing Aircraft Corporation St. Charles, MO

Small Diameter Bomb						
	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement						
Air Force	(2,030)	114.7	(1,395)	94.7	(2,612)	133.2
RDT&E						
Air Force	(-)	122.3	(-)	144.3	(-)	125.1
Navy	(-)	9.8	(-)	9.6	(-)	19.6
Subtotal	(-)	132.1	(-)	153.9	(-)	144.7
Total	(2,030)	246.8	(1,395)	248.6	(2,612)	277.9

Javelin Advanced Anti-Tank Weapon



The Javelin Advanced Anti-tank Weapon System-Medium is a man-portable fire and forget weapon system used against tanks with conventional and reactive armor. Special features of Javelin are the choice of top attack or direct fire mode, integrated day/night sight, soft launch permitting fire from enclosures, and imaging infrared seeker. Procurement funds buy Missiles, Command Launch Units (CLU) and Training Devices.

Mission: The mission of the Javelin is to defeat armored targets.

FY 2009 Program: The FY 2009 program continues production of Javelin missiles and CLUs.

Prime Contractors: Raytheon TI, Tucson, AZ
Lockheed Martin Javelin Joint Venture, Orlando, FL

Javelin Advanced Anti-Tank Weapon						
	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement	(250)	158.1	(385)	166.8	(605)	259.3
Total	(250)	158.1	(385)	166.8	(605)	259.3

DoD FY 2009 Budget Request Summary Justification

High Mobility Artillery Rocket System

The High Mobility Artillery Rocket System (HIMARS) consists of a C-130 transportable, wheeled, indirect fire, rocket/missile system capable of firing all rockets and missiles in the current and future Multiple Launch Rocket System (MLRS) family of munitions.



Mission: The mission of the HIMARS is to neutralize or suppress enemy field artillery and air defense systems and supplement cannon artillery fires.

FY 2009 Program: The FY 2009 program continues procurement of MLRS rockets and provides for continued upgrade development.

Prime Contractor: Lockheed Martin Missiles and Fire Control, Dallas, TX

High Mobility Artillery Rocket System

	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement (Rockets only)						
Army	(925)	124.9	(1,482)	201.8	(1,938)	247.2
Marine Corps	(180)	116.8	(38)	20.9	(165)	91.7
Subtotal	(1,105)	241.7	(1,520)	222.7	(2,103)	338.9
RDT&E						
Army	(-)	54.2	(-)	44.9	(-)	52.2
Marine Corps	(-)	0.0	(-)	0.0	(-)	0.0
Subtotal	(-)	54.2	(-)	44.9	(-)	52.2
Total	(1,105)	295.9	(1,520)	267.6	(2,103)	391.1

Evolved Seasparrow Missile



The Evolved Seasparrow Missile (ESSM) is an improved version of the NATO Seasparrow missile, designed for ship self-defense.

Mission: The mission of the ESSM is to defeat current and projected threats that possess low altitude, high velocity and maneuver characteristics beyond the engagement capabilities of other ship self-defense systems.

FY 2009 Program: The FY 2009 program continues production.

Prime Contractor: Raytheon Company, Tucson, AZ

Evolved Seasparrow Missile

	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement	(100)	99.1	(85)	82.7	(86)	85.1
Total	(100)	99.1	(85)	82.7	(86)	85.1

DoD FY 2009 Budget Request Summary Justification

Rolling Airframe Missile



The Rolling Airframe Missile (RAM) is a high firepower, lightweight complementary self-defense system to engage anti-ship cruise missiles.



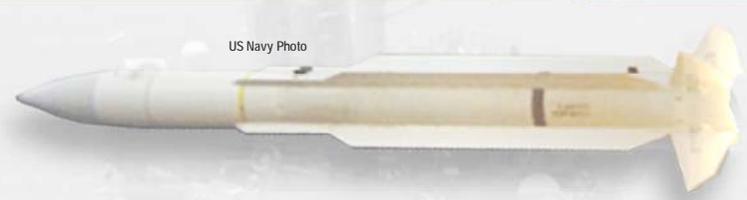
Mission: The mission of the RAM is to provide high firepower close-in defense of combatant and auxiliary ships by using a dual mode, passive radio frequency/infrared missile in a compact 21 missile launcher.

FY 2009 Program: The FY 2009 program continues production of missiles. Note that the FY 2007 program contained only new missile procurement; the FY 2008 and FY 2009 programs include both the procurement of new missiles and alterations to existing missiles—the quantities shown in the table below only account for new missile procurement.

Prime Contractor: Raytheon Corporation, Tucson, AZ

Rolling Airframe Missile						
	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement	(90)	56.6	(90)	75.5	(90)	74.3
Total	(90)	56.6	(90)	75.5	(90)	74.3

Standard Family of Missiles



The Standard missile family consists of various air defense missiles including supersonic, medium and extended range, surface-to-air missiles.

Mission: The mission of the Standard missile family is to provide all-weather, anti-air warfare armament for AEGIS cruisers, destroyers and guided missile frigates.

FY 2009 Program: The FY 2009 program continues production of the current SM-2 variant, and begins low-rate development of the follow-on SM-6 variant, for added capability.

Prime Contractor: Raytheon Corporation, Tucson, AZ

Standard Family of Missiles						
	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement	(75)	137.0	(75)	158.6	(70)	228.0
RDT&E	(-)	177.1	(-)	226.8	(-)	234.7
Total	(75)	314.1	(75)	385.4	(70)	462.7

DoD FY 2009 Budget Request Summary Justification

Tactical Tomahawk Cruise Missile



The Tactical Tomahawk is a Navy long-range conventional cruise missile weapon system which is sized to fit torpedo tubes and is capable of being deployed from a variety of surface ship and submarine platforms.

Mission: The mission of the TOMAHAWK is to provide a long-range cruise missile launched from a variety of platforms against land targets.

FY 2009 Program: The FY 2009 budget continues Tomahawk production.

Prime Contractor: Raytheon Company, Tucson, AZ

	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement	(355)	353.0	(394)	380.5	(207)	281.1
RDT&E	(-)	22.4	(-)	15.7	(-)	14.2
Total	(355)	375.4	(394)	396.2	(207)	295.3

Trident II Ballistic Missile



The Trident II (D-5) is a submarine launched ballistic missile with greater range, payload capability and accuracy than the Trident I.

Mission: The mission of the Trident II is nuclear war deterrence by means of assured retaliation in response to a major attack on the U.S. and to enhance nuclear stability by providing no incentive for enemy first strike.

FY 2009 Program: Provides funding for program and production support (including flight test instrumentation and additional re-entry system hardware) and the D-5 Missile Life Extension Program. The D-5 life extension funding procures D-5 missile motors and other critical components required to support the extended 45 year SSBN hull life (for a 14 SSBN Trident II program, which assumes the backfit of four C-4 boats to the D-5 configuration) and sustains the redesign of the guidance system and missile electronics.

Prime Contractor: Lockheed Martin Missiles and Space Company Sunnyvale, CA

	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement	(-)	914.4	(12)	1,044.7	(24)	1,093.2
RDT&E	(-)	79.3	(-)	44.2	(-)	45.5
Total	(-)	993.7	(12)	1,088.9	(24)	1,138.7

SHIPBUILDING AND MARITIME SYSTEMS

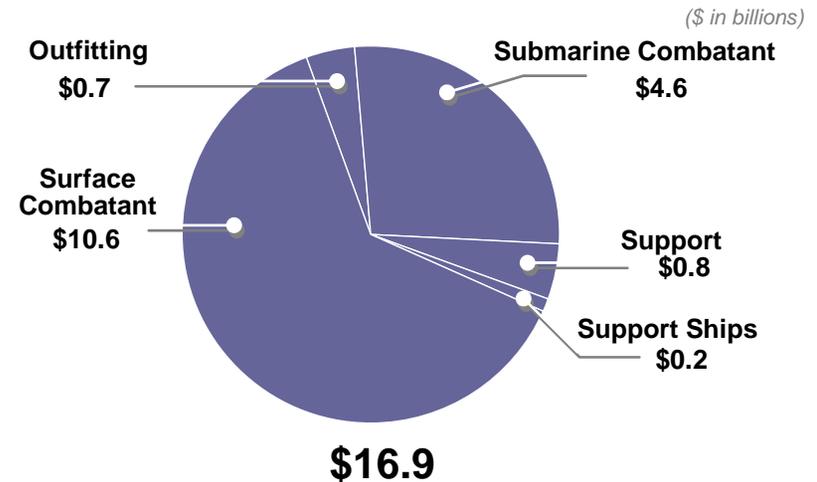
Shipbuilding and Maritime Systems

The U.S. Maritime Strategy is based on the principle of forward presence. Forward presence promotes conflict deterrence by ensuring Naval forces are in a position to respond to conflict expeditiously. By being a ready fleet, options can be maximized should conflict deterrence fail. In accordance with the U.S. Maritime Strategy, the Navy's Shipbuilding program aims to achieve a 313-ship fleet by FY 2020 for global missions (Figure 4.4) The 313-ship fleet will allow the U.S. to maintain maritime superiority well into the 21st century. The mobilization of the 313-ship fleet will ensure missions are accomplished.

Highlights of the FY 2009 Shipbuilding Program:

- CVN 21 Carrier Replacement program: procurements are for CVN 78 construction (the first of the CVN-21 class) and CVN 79 long lead time items;
- DDG 1000: third ship of the class;
- LCS procurements: two ships and three Mission Modules (two counter mine warfare packages and one Surface warfare package);
- SSN 774 (Virginia Class) nuclear fast attack submarine: procures one. The request includes funding to transition to a Multi-Year Procurement contract and two ships a year starting in FY 2011; and
- Joint High Speed Vessel (JHSV) program: procurements are for two vessels, 1 Navy and 1 Army.

FY 2009 Shipbuilding and Maritime Systems



Source: FY 2009 PRCP – Investment Categorization
Numbers may not add due to rounding

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Figure 4.4 Navy's 313-Ship Fleet

Ship	Qty
Aircraft Carriers (all nuclear)	11
Surface Combatants	88
Littoral Combat Ships	55
Attack Submarines	48
Cruise Missile Submarines	4
Ballistic Missile Submarines	14
Expeditionary Warfare Ships	31
Combat Logistics Ships	30
Maritime Propositioning Ships	12
Support Vessels	20
Total Naval Force	313

Source: United States Navy

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DoD FY 2009 Budget Request Summary Justification

Joint High Speed Vessel

DOD - JOINT

The Joint High Speed Vessel (JHSV) is a cooperative Army and Navy effort for a high speed shallow draft vessel designed for rapid intra-theater transport.



US Navy Image

Mission: JHSV will provide combatant commanders with high-speed, intra-theater sealift mobility and inherent cargo handling capacity and the agility to achieve positional advantage over operational distances.

FY 2009 Program: FY 2009 JHSV program procurements fund two vessels.

Prime Contractor: Currently under Source Selection

Joint High Speed Vessel

	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement						
Army	(-)	-	(1)	210.0	(1)	170.0
Navy	(-)	-	(-)	-	(1)	174.8
Subtotal	(-)	-	(1)	210.0	(2)	344.8
RDT&E						
Army	(-)	19.8	(-)	5.1	(-)	2.9
Navy	(-)	13.7	(-)	18.5	(-)	12.0
Subtotal	(-)	33.5	(-)	23.6	(-)	14.9
Total	(-)	33.5	(1)	233.6	(2)	359.7

Carrier Replacement

USN

The Carrier Replacement Program funds new construction of aircraft carriers. The last Nimitz Class carrier, CVN 77, is scheduled for delivery in 2008. CVN 77 will serve as the “bridge” platform for technologies that will enable the Navy to transition from the Nimitz class to the next generation aircraft carrier (CVN 21). CVN 21 ships will include new technologies such as an integrated topside island that includes a new multi-function radar, propulsion plant, flight deck enhancements, Electromagnetic Aircraft Launching System (EMALS) and advanced arresting gear.



US Navy Image

Mission: CVN 21 Carrier Replacement ships provide forward presence during peacetime; operate as the cornerstone of a joint and/or allied maritime expeditionary force in response to crisis; and carry the war to the enemy through joint multi-mission offensive operations.

FY 2009 Program: The FY 2009 Carrier Replacement Program provides funding for construction of the CVN 78 lead ship and provides Advance Procurement funding for CVN 79 long lead time items.

Prime Contractor: Northrop Grumman Newport News
Newport News, VA

Carrier Replacement

	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement	(-)	1,107.0	(1)	3,145.0	(-)	3,926.5
RDT&E	(-)	303.6	(-)	232.5	(-)	261.6
Total	(-)	1,410.6	(1)	3,377.5	(-)	4,188.1

DoD FY 2009 Budget Request Summary Justification

DDG 1000 Destroyer

The DDG 1000, formerly termed the DD(X), will be an optimally-crewed, multi-mission surface

combatant designed to fulfill volume firepower and precision strike requirements. Armed with an array of weapons, DDG 1000 will provide offensive, distributed and precision firepower at long ranges in support of forces ashore. To ensure effective operations in the littoral, DDG 1000 will incorporate full-spectrum signature reduction, active and passive self-defense systems and cutting-edge survivability features. The Navy plans to incorporate technologies developed under the DDG 1000 program into the entire family of new surface combatants, which include the CG(X) and the LCS.

Mission: DDG 1000 Zumwalt Class Destroyer ships (DDG 1000) provide striking power, sustainability, survivability, and information dominance.

FY 2009 Program: FY 2009 DDG 1000 program funds are for DDG 1002 construction and advance procurement for DDG 1003. Incremental funding was authorized by the FY 2007 National Defense Authorization Act.

Prime Contractors: Northrop Grumman Ship Systems
Ingalls Operations, Pascagoula, MS,
General Dynamics, Bath Iron Works, Bath, ME



Image Courtesy of Northrop Grumman

	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement	(2)	2,557.3	(-)	2,906.9	(1)	2,553.7
RDT&E	(-)	797.0	(-)	629.3	(-)	678.9
Total	(2)	3,354.3	(-)	3,536.2	(1)	3,232.6

Landing Helicopter Assault Ship

The Landing Helicopter Assault Replacement (LHA(R)) ship is a large deck amphibious assault ship, which facilitates forward presence and power projection in support of Seapower 21 operational concepts as an integral part of joint, interagency, and multinational maritime expeditionary forces. It embarks, supports, and operates for sustained periods with landing force elements including landing craft, aircraft, and Naval amphibious tactical and administrative organizations for command and control. This ship will provide increased aviation capability, vehicle lift, cargo magazine capacity and better survivability.

Mission: LHA(R) ships provide forward presence and power projection, independently and as an integral part of joint, interagency, and multi-national maritime expeditionary forces and support Expeditionary Strike Group/Marine Expeditionary Unit operations and as part of Maritime Expeditionary Brigade operations from the seabase.

FY 2009 Program: FY 2009 LHA(R) program funds technology developments.

Prime Contractor: Northrop Grumman Ship Systems
Pascagoula, MS



Image courtesy of Northrop Grumman

	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement	(1)	1,131.1	(-)	1,365.8	(-)	-
RDT&E	(-)	13.2	(-)	5.8	(-)	2.4
Total	(1)	1,144.3	(-)	1,371.6	(-)	2.4

DoD FY 2009 Budget Request Summary Justification

Littoral Combat Ship

The Littoral Combat Ship (LCS) will be a fast, agile, and stealthy surface combatant capable of operating in support of anti-access missions against asymmetric threats in the littorals. It will be the first Navy ship to separate capability from hull form and provide a robust, affordable, focused-mission warship enhancing the Navy's ability to establish sea superiority. LCS will be capable of employing manned and unmanned mission modules to counter some of the most challenging anti-access threats our naval forces may encounter close to shore – mines, quiet diesel submarines and swarming small boats. These modular packages are funded separately.

Mission: LCS defeats asymmetric threats and assures naval and joint forces access into contested littoral regions by prosecuting small boats, mines countermeasures, and littoral anti-submarine warfare.

FY 2009 Program: FY 2009 LCS procurements construct two LCS seaframes and three mission module packages.

Prime Contractor: Lockheed Martin Marinette Marine, General Dynamics (Austal USA, Mobile, AL)



Image courtesy General Dynamics

Image Courtesy Lockheed Martin

Littoral Combat Ship

	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement	(-)	93.0	(1)	337.1	(2)	920.0
RDT&E	(-)	663.9	(-)	304.1	(-)	371.0
Total	(-)	756.9	(1)	641.2	(2)	1,291.0

Amphibious Transport Dock Ship

The San Antonio Class Amphibious Transport Dock ships are functional replacements for 41 ships of four classes of amphibious ships. The LPD 17 design includes systems configurations that reduce operating and support costs and help operational performance improvements. These include composite masts, advanced sensors, advanced computers, advanced command and control software, advanced information systems technologies, and ship based logistics concepts.

Mission: LPD 17 San Antonio Class Amphibious Transport Dock ships embark, transport, and land elements of Marine landing forces in an amphibious assault by helicopters, landing craft, and amphibious vehicles.

FY 2009 Program: FY 2009 LPD 17 San Antonio Class Amphibious Transport Dock program funds program closeout costs.

Prime Contractor: Northrop Grumman Ship Systems
Ingalls Operations, Pascagoula, MS and
Avondale Operations, New Orleans, LA



US Navy Photo

Amphibious Transport Dock Ship

	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement	(-)	379.7	(1)	1,497.8	(-)	103.2
RDT&E	(-)	8.1	(-)	4.2	(-)	1.0
Total	(-)	387.8	(1)	1,502.0	(-)	104.2

DoD FY 2009 Budget Request Summary Justification

Virginia Class Submarine

The Virginia class is the next-generation of attack submarines and will provide the Navy with the capabilities to

maintain undersea supremacy in the 21st century. The Virginia class submarine is nuclear-powered and is intended to replace the fleet of 688 class submarines and is characterized by state-of-the-art stealth and enhanced features for Special Operations Forces. Virginia class submarines are able to attack targets ashore with Tomahawk cruise missiles and conduct covert long-term surveillance of land areas, littoral waters or other sea-based forces.

Mission: Virginia Class Submarines seek and destroy enemy ships across a wide spectrum of scenarios, working independently and in consort with a battle group and other ships, providing joint commanders with early, accurate knowledge of the battlefield.

FY 2009 Program: FY 2009 Virginia Class Submarine procurements are for SSN 784 construction and advance procurement for later submarines.

Prime Contractors:

General Dynamics Electric Boat Division, Groton, CT
Northrop Grumman Newport News, Newport News, VA



US Navy Photo

CVN Refueling Complex Overhaul

CVN Refueling Complex Overhaul (RCOH) is a program to refuel and upgrade Nimitz class aircraft carriers at about their mid-life of 25 years and extends the operational life of the ship. The nuclear

refueling and upgrades, which take approximately three years to complete, will provide for reliable operations during the remaining ship life using only the normal maintenance cycle. This incremental transformation of capabilities allows the ship to adapt to future mission requirements and meet continued service life requirements.

Mission: Nuclear aircraft carriers support and operate aircraft engaging in attacks on targets afloat and ashore which threaten our use of the sea, and to engage in sustained operations in support of other forces.

FY 2009 Program: The FY 2009 CVN Refueling Complex Overhaul program accelerates the USS Theodore Roosevelt (CVN 71) RCOH to FY 2009.

Prime Contractor: Northrop Grumman Newport News
Newport News, VA



Photo Courtesy of Northrop Grumman

Virginia Class Submarine

	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement	(1)	2,552.7	(1)	3,174.3	(1)	3,423.6
RDT&E	(-)	197.1	(-)	244.1	(-)	167.4
Total	(1)	2,749.8	(1)	3,418.4	(1)	3,591.0

CVN Refueling Complex Overhaul

	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement	(-)	1,067.1	(-)	295.3	(-)	628.0
Total	(-)	1,067.1	(-)	295.3	(-)	628.0

DoD FY 2009 Budget Request Summary Justification

Auxiliary Dry Cargo and Ammunition Ship 



The T-AKE Auxiliary Dry Cargo and Ammunition Ship replaces the aging fleet of refrigerated cargo and food stores ships (designated AFS Class) and ammunition ships (designated AE Class) in the Navy’s Combat Logistics Force. The T-AKE provides logistic lift capability as a shuttle ship from sources of supply for transfer at sea to station ships and other Naval Warfare Forces.

Mission: Lewis and Clark Class (T-AKE) Auxiliary Dry Cargo ships provide ammunition, spare parts and provisions to naval forces at sea in their role as shuttle ships.

FY 2009 Program: FY 2009 Lewis and Clark Class T-AKE Auxiliary Dry Cargo ship program procures two ships.

Prime Contractor: National Steel and Shipbuilding Company, San Diego, CA

Auxiliary Dry Cargo and Ammunition Ship

	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement*	(1)	453.2	(-)	753.3	(2)	962.4
Total	(1)	453.2	(-)	753.3	(2)	962.4

* Procurement for this ship is funded through the National Defense Sealift Fund revolving fund, not the US Navy Procurement Account

SPACE BASED AND RELATED SYSTEMS

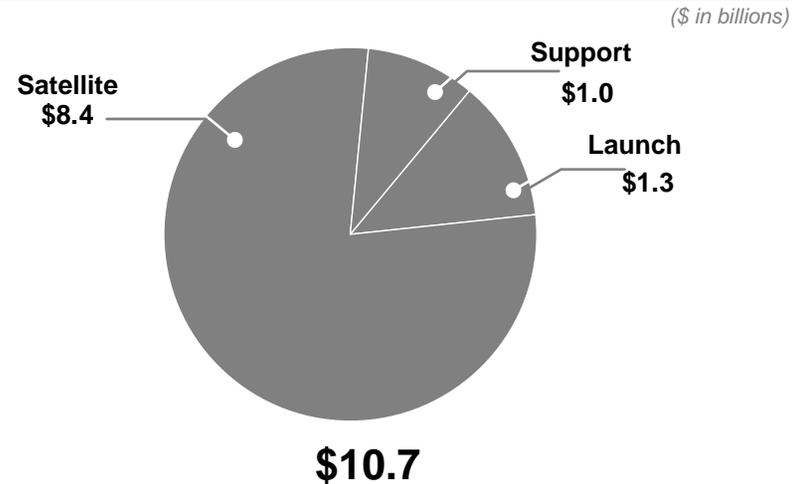
Space Based and Related Systems

Space assets support deployed U.S. forces by providing communications services, navigation capabilities, and information collected by remote sensors such as weather satellites and intelligence collection systems. Space forces contribute to the overall effectiveness of U.S. military forces by acting as a force multiplier that enhances combat power. The capability to control space will contribute to achieving information superiority and battlespace dominance. This category includes all space-based systems except Space Tracking and Surveillance Satellite for STSS, which is under Missile Defense.

Highlights

Procurement of satellites and launch services are typically funded two years prior to launch. Generally speaking the first two satellites of a new system are purchased with Research, Development, Test & Evaluation funding and the remainder of the satellites are purchased with procurement funding. The funding devoted for space programs continues to grow in the FY 2009 budget request in recognition of the growing importance and the expanding contribution that space systems have in supporting the DoD mission requirements. Since FY 2007, the funding for space systems has increased by 35 percent, most notably to develop and procure a new generation of spacecraft that provide a vital contribution to

FY 2009 Space Based and Related Systems



Source: FY 2009 PRCP – Investment Categorization
Numbers may not add due to rounding

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communications, navigation, weather forecasting, tactical warning and attack assessment, and surveillance.

The FY 2009 request includes increases from FY 2008 funding levels for the next generation Global Positioning System (GPS) satellite (+\$0.1 billion); the Navy's communications fleet satellite (+\$0.2 billion); and the Space Based Infrared System (+\$1.3 billion).

DoD FY 2009 Budget Request Summary Justification

Mobile User Objective System

The Mobile User Objective System (MUOS) is the next generation DoD advanced narrow band communications satellite constellation. The MUOS satellite includes the new networked payload and a separate legacy payload. MUOS will replace the existing UHF Follow-On (UFO) constellation and provide a much higher data rate capability for mobile users. The first satellite launch is planned for FY 2010.

Mission: The mission of the MUOS is to satisfy Ultra High Frequency (UHF) narrow-band communications requirements.

FY 2009 Program: Provides funding to continue system development of the satellite system, procurement of the launch vehicle for satellite 2, procurement of satellite 3, and procurement of long lead items for satellite 4.

Prime Contractor: Lockheed Martin Space Systems, Sunnyvale, CA

Mobile User Objective System						
	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement	(-)	-	(-)	214.4	(1)	507.5
RDT&E	(-)	645.9	(-)	598.2	(-)	516.8
Total	(-)	645.9	(-)	812.6	(1)	1,024.3

Advanced Extremely High Frequency

The Advanced Extremely High Frequency (AEHF) Satellite is a constellation of communications satellites that will replenish the existing EHF system (MILSTAR) at much higher capacity and data rate capability. The AEHF constellation will provide survivable, anti-jam, worldwide secure communications for strategic and tactical users. AEHF is a collaborative program that includes resources for Canada, the UK, and the Netherlands. The first satellite is expected to launch in the first quarter of FY 2009, and the second satellite will launch in the third quarter of FY 2009.

Mission: The mission of the AEHF is to provide secure, survivable worldwide communications. It will support both strategic and tactical users and be backward compatible with the MILSTAR communication satellite system.

FY 2009 Program: Launches the first two satellites, continues the assembly and integration of the third satellite, completes the acquisition of long-lead parts for the fourth satellite, and continues the development of the ground control system.

Prime Contractor: Lockheed Martin Space Systems, Sunnyvale, CA

Advanced Extremely High Frequency (AEHF) Satellite						
	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement	(-)	-	(-)	132.1	(-)	16.6
RDT&E	(-)	617.3	(-)	599.4	(-)	388.0
Total	(-)	617.3	(-)	731.5	(-)	404.6

DoD FY 2009 Budget Request Summary Justification

Evolved Expendable Launch Vehicle

The Evolved Expendable Launch Vehicle (EELV) replaces the current families of Delta, Atlas, and Titan launch vehicles with a new, lower cost program for the acquisition of space launch services. EELV significantly reduces launch costs over current systems by redesigning launch hardware and ground processing facilities and by introducing commercial business practices. As of December 2006, the United Launch Alliance joint venture is the sole provider of EELV launch services.

Mission: The mission of the EELV is to provide DoD and other government and commercial purchasers launch services for medium- to heavy-lift class satellites.

FY 2009 Program: Provides funding for the procurement of four launch vehicles and associated launch services and support activities.



Prime Contractors: United Launch Alliance, Decatur, AL

Evolved Expendable Launch Vehicle						
	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement	(3)	852.1	(4)	1,091.8	(4)	1,205.3
RDT&E	(-)	19.1	(-)	-	(-)	33.7
Total	(3)	871.2	(4)	1,091.8	(4)	1,239.0

Global Positioning System

The Global Positioning System (GPS) provides a global, three-dimensional positioning, velocity and time information system for aircraft, artillery, ships, tanks and other weapons delivery systems. The fully operational GPS constellation consists of 24 satellites in orbit at all times.

Mission: The mission of the GPS is to provide a global system of satellites for positioning, navigation, and timing (PNT) purposes.

FY 2009 Program: Provides for satellite launch and integration of replenishment satellites, continued development of the GPS constellation, as well as the GPS III satellite variant, the next generation in precision satellite navigation. The GPS satellites being launched prior to GPS III, coming online in FY 2013, were purchased prior to FY 2007 and are currently in storage.



Prime Contractor: Block IIR: Lockheed Martin, King of Prussia, PA
Block IIF: Boeing, Seal Beach, CA

Global Positioning System						
	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement	(-)	95.7	(-)	219.4	(-)	135.6
RDT&E	(-)	452.1	(-)	601.9	(-)	819.0
Total	(-)	547.8	(-)	821.3	(-)	954.6

DoD FY 2009 Budget Request Summary Justification

NPOESS

The National Polar-orbiting Operational Environmental Satellite System (NPOESS) will be used to monitor global environmental conditions through highly technical collection and dissemination processes. Initial launch capability for NPOESS is planned for the second quarter of FY 2013.

Mission: The mission of the NPOESS four satellite constellation is to provide timely, high-quality environmental data on weather and atmospheric conditions, covering the oceans, land, and near-space environments.

FY 2009 Program: Continues system development and design for risk reduction missions involving both ground and space systems. NPOESS is a joint effort with the Department of Commerce (DOC), the National Aeronautics and Space Administration (NASA) and the U.S. Air Force.



Prime Contractor: Northrop Grumman Space Technology, Redondo Beach, CA

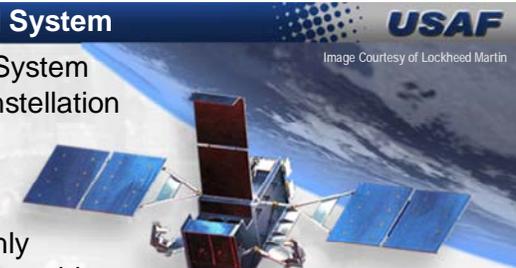
	NPOESS					
	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
RDT&E	(-)	343.3	(-)	332.5	(-)	289.5
Total	(-)	343.3	(-)	332.5	(-)	289.5

Space Based Infrared System

Space Based Infrared System (SBIRS) will field a constellation of four satellites in geosynchronous earth orbit (GEO), and two hosted payloads in highly elliptical orbit (HEO) to provide initial warning of a ballistic missile attack. SBIRS is the follow-on system to the Defense Support Program. The first launch is scheduled for the first quarter of FY 2010.

Mission: The mission of the SBIRS is to use new technologies to enhance detection and improve reporting of strategic and tactical ballistic missile launches.

FY 2009 Program: Provides funding to continue the assembly, integration, and testing of the first two GEO satellites, operational testing of the first HEO payload, and development of the ground segment.



Prime Contractor: Lockheed Martin Corporation, Sunnyvale, CA

	Space Based Infrared System					
	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement	(-)	6.5	(-)	399.3	(2)	1,798.4
RDT&E	(-)	677.9	(-)	583.3	(-)	529.8
Total	(-)	684.4	(-)	982.6	(2)	2,328.2

DoD FY 2009 Budget Request Summary Justification

Transformational Satellite Comm System 

The Transformational Satellite Communications System (TSAT) system will transform warfighters' information capabilities. It will enhance the Advanced Extremely High Frequency Satellite Communication System and provide secure, survivable, anti-jam communications. Through use of internet-like connectivity, TSAT will enable global net-centric communications extending the Global Information Grid into space. The first satellite is currently planned to launch in the first quarter of FY 2016



Mission: The mission of the TSAT system is to provide the DoD with secure, survivable worldwide communications using internet protocol packet switching and laser technologies.

FY 2009 Program: Provides funding to continue the program's development and production of the space segment and the development of the network and operation management system.

Prime Contractors Risk Reduction & System Definition:
 Lockheed Martin Space Systems, Sunnyvale, CA
 Boeing, El Segundo, CA

Transformational Satellite Communications System						
	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$)	(Qty)	Amt (\$)	(Qty)	Amt (\$)
RDT&E	(-)	700.4	(-)	804.7	(-)	843.0
Total	(-)	700.4	(-)	804.7	(-)	843.0

Wideband Global SATCOM System 

The Wideband Global Satellite Communication system (WGS) is a constellation of six satellites that will provide unprotected satellite bandwidth primarily for deployed forces and warfighter communications. Australian investment in the system provided the funding to procure a sixth satellite. The satellites will be launched with an intermediate-sized variant of the Evolved Expendable Launch Vehicle (EELV). The first launch occurred on October 10, 2007, with operations scheduled to begin in April 2008. The second launch is planned for mid 2008.



Mission: The mission of the WGS system is to provide a substantial bandwidth increase over the Department's Interim Wideband System consisting of the Defense Satellite Communications System (DSCS) and the Global Broadcast Service (GBS). Additionally, WGS will provide a new two-way Ka-band service.

FY 2009 Program: Provides launch of the third satellite and on-orbit testing of the second and third satellites, continues production of the fourth and fifth satellites, and funds full production for the sixth satellite.

Prime Contractor: Boeing Space Systems, El Segundo, CA

Wideband Global Satellite Communication System						
	FY 2007		FY 2008		FY 2009	
	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)	(Qty)	Amt (\$M)
Procurement	(1)	412.5	(1)	322.9	(-)	22.5
RDT&E	(-)	44.0	(-)	19.1	(-)	12.4
Total	(1)	456.5	(1)	342.0	(-)	34.9